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**DETERMINANTS OF CUSTOMER LOYALTY IN CELLULAR
SERVICE SECTOR OF PAKISTAN: MEDIATING AND
MODERATING EFFECTS**



BEENISH TARIQ

UUM
Universiti Utara Malaysia

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA**

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SECTOR OF PAKISTAN: MEDIATING AND MODERATING EFFECTS**

By



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**Thesis Submitted to
School of Business Management, College of Business,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy**

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ABSTRACT

The customer loyalty has become essential for survival and success of cellular service providers with the saturation and maturity of the cellular service sector of Pakistan. This research focuses on the direct and indirect determinants of customer loyalty of the prepaid segment in the cellular service sector of Pakistan. This study examines the direct influence of perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction, and customer trust on customer loyalty. This research also examines the role of customer satisfaction and customer trust as a mediator and government regulations as a moderator towards customer loyalty. The consideration of putting both mediators and moderator in this research allows a more precise description of the relationship between all the variables mentioned and the outcome of the research. The model under study is developed using the proven predictive power of the Oliver's Four Stage Loyalty Model and The Nudge theory. A total of 392 prepaid cellular service consumers located in capital cities of four provinces of Pakistan participated in this study through mall-intercept sampling technique. The PLS SEM analysis results indicated that perceived service quality, customer satisfaction and customer trust are significant positive direct determinants of customer loyalty. In addition, perceived service quality, sales promotion, perceived corporate social responsibility are significant positive determinants of customer satisfaction. Moreover, perceived service quality, perceived corporate social responsibility and customer satisfaction are significant positive determinants of customer trust. Furthermore, perceived service quality and corporate social responsibility revealed as significant positive indirect determinants of customer loyalty through the mediation of customer satisfaction and customer trust. Finally, the findings indicate the significant positive moderation of government regulations for the relationship between perceived value and customer loyalty and significant and negative moderation for the relationship between perceived corporate social responsibility and customer loyalty. This study also provided some valuable insights on how customer loyalty can be captured in the cellular service sector of Pakistan, where government regulations are influencing the behaviour of cellular consumers. It also suggested the government as a policymaker to understand the effectiveness of its regulations in the cellular service sector of Pakistan. Furthermore, this study is limited to prepaid cellular sector of Pakistan and suggested to incorporate the other segments of cellular sector in future studies.

Key Words: Customer loyalty, customer satisfaction, customer trust, government regulations, cellular service sector.

ABSTRAK

Kesetiaan pelanggan adalah faktor penting bagi memastikan penyedia perkhidmatan selular berdaya tahan dan berjaya dalam menyediakan sektor perkhidmatan selular di Pakistan. Kajian ini memfokuskan kepada pengaruh langsung dan tidak langsung kesetiaan pelanggan bagi segmen prabayar dalam sektor perkhidmatan selular di Pakistan. Tujuan kajian ini dijalankan adalah untuk menyelidik pengaruh langsung terhadap kualiti perkhidmatan yang diterima, nilai yang dilihat, promosi jualan, tanggungjawab sosial korporat, kepuasan pelanggan, dan kepercayaan pelanggan terhadap kesetiaan pelanggan. Kajian ini juga dijalankan untuk meneliti peranan kepuasan pelanggan dan kepercayaan pelanggan sebagai perantara dan kawalan kerajaan sebagai penyederhana terhadap kesetiaan pelanggan. Peranan perantara dan penyederhana telah diambil kira dalam kajian ini bagi membolehkan penerangan yang lebih tepat dilakukan tentang hubungan antara kesemua pemboleh ubah seperti yang telah dinyatakan dan juga hasil kajian. Model dalam kajian ini telah dibina dengan menggunakan kuasa ramalan terbukti berdasarkan Model Empat Tahap Kesetiaan Oliver dan Teori Nudge. Sejumlah 392 orang pengguna perkhidmatan selular prabayar yang berada di ibu negara bagi empat buah wilayah Pakistan telah mengambil bahagian dalam kajian ini melalui teknik persampelan *mall-intercept*. Hasil kajian daripada analisis SEM- PLS menunjukkan bahawa kualiti perkhidmatan yang diterima, kepuasan pelanggan dan kepercayaan pelanggan adalah positif dan signifikan sebagai penentu langsung terhadap kesetiaan pelanggan. Di samping itu, kualiti perkhidmatan yang diterima, promosi jualan, tanggungjawab korporat sosial adalah penentu positif yang signifikan terhadap kepuasan pelanggan. Selain itu, kualiti perkhidmatan yang diterima, tanggungjawab sosial korporat dan kepuasan pelanggan adalah peramal positif yang signifikan terhadap kepercayaan pelanggan. Tambahan lagi, kualiti perkhidmatan dan tanggungjawab sosial korporat dilihat sebagai penentu kesetiaan pelanggan yang secara tidak langsung adalah positif melalui kedua-dua pengantara iaitu kepuasan pelanggan dan kepercayaan pelanggan. Akhir sekali, hasil kajian menunjukkan bahawa penyederhanaan positif adalah signifikan bagi kawalan kerajaan dalam hubungan antara nilai yang dilihat dan kesetiaan pelanggan, manakala penyederhanaan signifikan adalah negatif dalam hubungan antara tanggungjawab sosial korporat dan kesetiaan pelanggan. Kajian ini juga menyediakan beberapa pandangan tentang cara kesetiaan pelanggan dapat dilihat dalam sektor perkhidmatan selular di Pakistan. Hal ini kerana kawalan yang dilakukan oleh kerajaan mempengaruhi tingkah laku pengguna selular. Kajian ini juga memberi cadangan kepada kerajaan sebagai pembuat dasar untuk lebih memahami keberkesanan kawalannya dalam sektor perkhidmatan selular di Pakistan. Tambahan pula, kajian ini adalah terhad kepada sektor selular prabayar di Pakistan dan mencadangkan agar dimasukkan segmen sektor selular lain dalam kajian pada masa hadapan.

Kata kunci: kesetiaan pelanggan, kepuasan pelanggan, kepercayaan pelanggan, kawalan kerajaan, sektor perkhidmatan selular

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LIST OF ABBREVIATIONS

BCa	Biased Correct and Accelerated
CL	Customer Loyalty
CS	Customer Satisfaction
CSR	Corporate Social Responsibility
CT	Customer Trust
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GGR	Global Government Regulations
GPSQ	Global Perceived Service Quality
GR	Government Regulations
GSM	Global System for Mobile
GSP	Global Sales Promotion
IBM	International Business Machines
PKR	Pakistani Rupees
PLS	Partial Least Square
PP	Probability Plot
PSQ	Perceived Service Quality
PTA	Pakistan Telecommunication Authority
PV	Perceived Value
QoS	Quality of Standard
R&D	Research and Development
SBST	Social and Behavioral Science Team
SEM	Structural Equation Modelling
SME	Small Medium Enterprise
SP	Sales Promotions
SPSS	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Chapter Overview

This chapter explains the background of the study, problem statement, research question and research objectives. Afterwards, it discusses the scope of the study and significance of the study. It ends by explaining the organization of the thesis.

1.2 Background of Study

Academician and practitioners have always emphasized the importance of customer loyalty for organizational profitability, success and survival in the long run. The loyal consumers purchase more products or services and recommend the seller in a positive manner to other people, eventually contributes to increasing profitability (Chadha & Kapoor, 2009; Cheng, Lai, & Yeung, 2008; Rahmani, Ranjbar, & Gara, 2017; Wang, 2010). It is especially an important factor in saturated and hyper-competitive markets where only customer acquisition cannot help to survive (Hyun, 2010; Kaur & Soch, 2012; Pumim, Srinuan, & Panjakajornsak, 2017), infact, customer loyalty through repeat patronage would surely help to succeed in the long run. Once the customers are loyal, they will not hesitate to pay premium prices, eventually promoting the business while fostering a firm's survival (Aydin & Özer, 2005; Cheng et al., 2008; Izogo, 2015; Morgan & Govender, 2017). The importance of customer loyalty is further highlighted by Gallo (2014), who suggests that it is five to twenty-five times more expensive to acquire new customers than to keep the existing customers loyal, depends on which industry you are operating. She further advocates the prominence of loyal customers sharing a research finding done by Frederick Reichheld of Bain & Company, according

to which improving loyalty of customers by five percent helps to increase profitability by ninety-five percent. In the same vein, Reichheld and Scheffer (2000) stressed that customer loyalty is undervalued and it should be a priority over customer acquisition otherwise the survival of the business will be at risk. So considering the integral role of customer loyalty for long-term survival, profitability and success of firms, marketers and practitioners have examined the various factors that encouraged consumers to stay loyal toward the products or services of a particular organization.

In highly competitive and saturated industries such as cellular telecommunication, one of the methods to stay profitable is maintaining the loyal customer base (Park, Kim, & Kwon, 2017; Shrivastava & Israel, 2010). This fact is elaborated by Gerpott, Rams, and Schindler (2001) in the following manner:

"Especially in telecommunications services, it is frequently pointed out that once customers have been acquired and connected to the telecommunications network of a particular operator; their long-term relations with the focal operator are of greater importance" to the success of the company in competitive markets than they are in other industry sectors (Gerpott et al., 2001, p. 249).

Similarly, Kaur and Soch (2012) as well as Morgan and Govender (2017), extend that considering the high churn rate, immense competition, and high acquisition costs, the best core marketing strategy in the cellular service sector would be trying to retain the current customers by heightening their loyalty. Since the cellular telecom markets are becoming saturated and matured worldwide with high penetration rates, new customer acquisition has become more difficult and expensive (Jeng & Bailey, 2012). Hence, the cellular operators are focusing more on customer retention than just customer

acquisition, because customer loyalty is less expensive and generate more profitability (Amin et al., 2017; Kisioglu & Topcu, 2011).

It is not an exaggeration to state that telecommunication sector in Pakistan has become one of the biggest sectors over the past decade. It consists of cellular providers and landline network providers (Shahzad & Kausar, 2016). Currently, Pakistan's cellular service sector dominates the telecommunication market with 69.12% teledensity (Pakistan Telecommunication Authority, 2015) so the cellular sector is the major contributor towards the growth of telecommunication sector of Pakistan (Pakistan Telecommunication Authority, 2016a). Pakistan's cellular sector consists of five experienced cellular service providers i.e. Mobilink, Ufone, Telenor, Warid and Zong (Pakistan Telecommunication Authority, 2016a).

The cellular sector of Pakistan has shown a remarkable growth since its inception, though it is facing the challenge of inculcating loyalty among cellular consumers (Chattha, Naqi, & Haroon, 2016; Nasir, Mushtaq, & Rizwan, 2014; Shahzad & Kausar, 2016). According to Pakistan Telecommunication Authority (2015), on average every customer holds 2.17 sim cards, suggesting that every customer has more than two sim cards. This situation reveals that cellular customers always keep alternative options with them. They hold and use two or more than two sim cards at a time (Pakistan Telecommunication Authority, 2015) and lack loyalty toward their cellular service providers.

Although the cellular consumers lack loyalty, it is seven times costly to acquire a new customer than to keep the existing one on average in the cellular service sector (Ali et

al., 2010). Another challenge for acquiring the new customers is the high penetration rate and saturation in the cellular market of Pakistan (Chattha et al., 2016; Nasir et al., 2014; Saeed, Lodhi, et al., 2013). So there is a need to find out those factors which affect customers' behaviour and generate customer loyalty in the cellular consumer of Pakistan (Awan & Iqbal, 2014; Khokhar et al., 2011; Sabir, Irfan, Sarwar, Sarwar, & Akhtar, 2013). Hence, this study keeping in view the importance of customer loyalty for success, survival and profitability of cellular service providers in Pakistan, examine the direct determinants of customer loyalty, with those factors which play the role of mediators and moderator in addition. Before discussing the problem statement, a brief discussion about the cellular sector of Pakistan is warranted.

1.2.1 Overview of Pakistan's Economy and Telecommunication Sector

Pakistan is situated at the junction of China, Central Asia, South Asia and the Middle East thus acquired the prime importance of global trade. It is the world's sixth most populous country having a populace of more than 207.8 million individuals (Rana, 2017). Moreover, the GDP per capita is \$5400 in terms of purchasing power parity (Factbook, 2017). While looking at the economy of Pakistan, it is revealed that Pakistan is the 40th largest economy in the world in terms of nominal GDP (Zahid, 2017). In the year 2016-17, Pakistan gained an overall growth in GDP by 5.28%. In particular, the industrial sector expanded by 5.0 %, while agriculture grew by 3.5% and services sector by 5.98 % (Pakistan Economic Survey, 2017). These statistics reveal that service sector of Pakistan is the backbone of Pakistan's economy.

Telecommunication particularly cellular service sector is the most profitable sector among all service sector of Pakistan (Pakistan Telecommunication Authority, 2015).

This is evident by the fact that, it contributes PKR. 369,118 million (78.93%) out of total PKR. 467,642 million to revenue of Pakistan during the year 2016-2017 (Pakistan Telecommunication Authority, 2016, 2017). In addition to this, the telecommunication sector is a significant source of revenue generation for the national exchequer. Telecommunication sector contributed an average of PKR. 161.43 billion annually to the national exchequer in terms of taxes, regulatory fees, initial and annual license fees, activation tax, and other charges during the year 2016-2017 (Pakistan Telecommunication Authority, 2017). So, telecommunication sector plays an important role in the economic well-being of Pakistan.

1.2.1.1 Emergence of Cellular Service Sector in Pakistan

Telecommunication services were introduced in Pakistan by 1991 and since then this sector has seen tremendous growth. Pakistan Telecommunication Company Limited (PTCL) was the first telecommunication landline service provider in Pakistan which started its operation in 1991 (Khan & Afsheen, 2012). In 1994, for the first time in Pakistan, Mobilink a subsidiary of an Egypt-based multinational company, Orascom launched cellular Global System for Mobile Communications (GSM) services. At that time, it was a luxury service which only rich people can afford. Later in 2001, PTCL introduced its GSM cellular services with the name of Ufone (Khan & Afsheen, 2012). In 2006, as a result of PTCL's privatization, Ufone became a part of the Emirates Telecommunication Corporation Group (Etisalat) (Ufone, 2016). Telenor Pakistan got the GSM license in the year 2004 and started its services in the year 2005 on 15 March (Telenor., 2016). Warid telecom is a 100% owned company of the Abu Dhabi Group, which launched its cellular services in Pakistan in May 2005 (Warid., 2016). Zong

(China Mobile Pakistan) is a subsidiary of China Mobile. It started its operations in April 2008 (Zong, 2016). The presence of these five cellular service providers and licensing of 3G/4G technology in 2014 made this sector hyper-competitive and saturated (Pakistan Telecommunication Authority, 2015).

1.2.1.2 Cellular and Landline Teledensity in Pakistan

Tele-density, which denotes the number of telecom users per 100 persons in population, is an indicator of telecom penetration in the country (Mishra, 2015).

Table 1. 1
Tele-density of Telecom Sector of Pakistan

Year	Cellular	Landline
2005-06	22.21%	3.37%
2006-07	39.94%	3.04%
2007-08	54.60%	2.70%
2008-09	58.20%	2.20%
2009-10	60.40%	2.16%
2010-11	64.80%	1.90%
2011-12	68.50%	1.70%
2012-13	71.40%	1.70%
2013-14	76.46%	1.73%
2014-15	60.70%	1.73%
2015-16	69.12%	1.53%
2016-17	72.41 %	1.50%

Source: Pakistan Telecommunication Authority (2017c)

Telecom industry of Pakistan consists of landline and cellular service providers. The overview of last ten years of telecom industry and the statistics for teledensity make it clear that consumers are shifting from landline to cellular telecommunication services. In the year 2005-2006 teledensity for the landline was 3.37% as compared to the cellular sector which was 22.7 % in the year 2005-2006. Table 1.1 gives an overview of teledensity of recent ten years of the telecom industry of Pakistan. These statistics revealed the increase in adoption of cellular services in Pakistan over the years. Since more than fifty percent of Pakistan's telecommunication market consists of cellular service customers, this study includes only cellular customers to explore the factors affecting customer loyalty.

1.2.1.3 Cellular Subscribers

According to Pakistan Telecommunication Authority (2016a, 2017b), the cellular sector has experienced tremendous growth in the number of subscribers since 2009 (Pakistan Telecommunication Authority, 2014). The total number of subscribers in the cellular service sector for recent five-year are given in table 1.2.

Table 1. 2
Cellular Subscriber Count in Recent Five Years

Year	Number of Subscribers
2012-2013	127,737,286
2013-2014	139,974,754
2014-2015	114,658,434
2015-2016	133,241,465
2016-2017	139,758,116

Source: Pakistan Telecommunication Authority (2009, 2016a, 2017b)

1.2.1.4 Issue of Lack of Loyalty in Cellular Service Sector of Pakistan

Nowadays there is less risk of switching a cellular service provider because of Mobile Number Portability (MNP) facility as it helps the consumers to retain their existing number and change the service provider. So this facility encourages the switching process and increases churn. In South Asia, Pakistan was the first country to introduce MNP facility in March 2007 (Pakistan Telecommunication Authority, 2012a). This facility allows the customers to switch conveniently among the cellular service providers without encountering the risk of changing their current mobile number. The MNP statistics released by PTA in 2012 shows that cellular customers initiated 1.74 million MNP requests between June and September 2012 (Business Recorder, 2012). This high rate of MNP utility declares that customers are switching swiftly from one cellular service provider to another in Pakistan.

In addition, currently, cellular service providers are facing negative growth in subscriber base with low pace of new cellular subscribers due to saturation of cellular service sector (Siddiqui, 2017). Siddiqui (2017) further adds that according to one industry resource, the decrease in subscriber base from one cellular service provider, causes an increase in another cellular service provider subscriber base, hence “is showing consumers’ behaviour” (Jaffery, 2017). These trends reflect lack of loyalty in cellular consumers of Pakistan.

A variety of strategies can be used to remain competitive for example reducing operational cost, introducing new services, attracting new customers and maintaining customer loyalty. As customer acquisition is more expensive than keeping the customer loyal and cellular service sector has reached its point of saturation in Pakistan where

customer acquisition is very difficult (Siddiqui, 2017). This argument led to the conclusion that existing customers are more profitable for the cellular service providers, and cellular operators should give them special attention. In other words, it is necessary to retain the existing customers for the success and survival of the cellular operators. Before developing the strategies to retain the customers, there is a need to develop the insights about the direct and indirect determinants of customer loyalty and prevailing issues i.e. role of government regulations in the cellular service sector of Pakistan.

1.2.1.5 Role of Government Regulations in Cellular Service Sector of Pakistan

Telecommunication industry has been recognized as the most prominent sector for its contribution to GDP of Pakistan and societal well-being by the government of Pakistan. The telecommunication sector has contributed significantly to connecting the nation and providing socio-economic opportunities to the people of Pakistan. The success of this strategically important sector can be attributed to the continuity of regulations of the Government of Pakistan and conducive regulatory environment (Ministry of Information Technology Government of Pakistan, 2015).

The principal legislation governing the cellular service sector in Pakistan is the Pakistan Telecommunication Act 1996, according to which Pakistan Telecommunication Authority (PTA) was developed to regulate the telecommunication sector including cellular service sector. Hence, PTA is the primary regulator for the cellular service sector in Pakistan and is responsible for regulating the operation, establishment and maintenance of cellular service systems and the provisions of cellular services (Pakistan Telecommunication Authority, 2018).

Apart from regulating the cellular service sector, it also protects and promotes the interest of cellular service consumers. For this purpose, in recent few years, the government has made significant changes in existing regulations concerning consumers' interests and also develop new regulations. For example A complete telecommunication policy is developed in the year 2015 and PTA 2009 consumer protection act is amended in the year 2016 and these extensive regulatory changes are rigorously implemented by the Government in the cellular service sector (Gul, 2016; A. Khan, 2016a; Pakistan Telecommunication Authority, 2017a; Pakistan Today, 2016). It is evident by the fact that Pakistan telecommunication authority received 'GSMA Government Leadership Award 2017' at Mobile World Congress in Barcelona, Spain (Waterfield, 2017).

In the light of these recent government regulations in the cellular service sector, following steps are taken by government which directly influence the cellular consumers.

The government has developed the Consumer Protection Directorate (CPD) to protect and promote the interests of consumers (Mehran, 2017). This directorate aims to address consumers' complaints and gauge the performance of cellular service providers and plays an important role in case of violation of consumers' rights given in consumer protection act (Pakistan Telecommunication Authority, 2017a).

In addition, PTA has defined and implemented the cellular mobile quality of service regulations 2011, which describes the quality of services (QoS) standards for cellular service providers (Pakistan Telecommunication Authority, 2011a). To ensure the

quality of services, PTA keeps on conducting audits/surveys to check QoS and accuracy of billing round-the-year and visits the customer service centres of cellular service providers (Pakistan Telecommunication Authority, 2011c). All QoS surveys are conducted with state-of-the-art drive test tool and the results are shared with general public after proper analysis (Pakistan Telecommunication Authority, 2016b).

Furthermore, the government also played an important role in regulating the advertisement of sales promotion tariffs by publishing the tariff awareness guide. This guide helps the consumers to make well-informed decisions regarding choice of sales promotion packages, informing them of their and the operator's rights with regards to tariff packages, and conveying the ways of seeking remedy should they feel the operator has not fulfilled its responsibility (Rab, 2012). In addition, according to consumer protection regulatory act, cellular service providers are bounded to publish all key features of sales promotional scheme to increase its transparency for consumers' wellbeing (Gul, 2016).

The telecommunication policy-2015 clearly state the environmental obligations for telecommunication sector including cellular sector. In addition, the cellular operators are directed to participate in corporate social responsibility activities and encouraged to promote the well-being of society at large.

In addition, the government also revised and regulated the sim selling process in August 2014, whereby PTA enforced the cellular sector to do biometrics verification of existing sims cards and revised the sim selling process to sell sim cards with biometrics verification. This relegation blocked 26 million unverified sim cards and reduced the

teledensity to 60.7% from 76.5% in the year 2014-15 (Pakistan Telecommunication Authority, 2015)

Moreover, the government also introduced the price floor regime for the cellular sector, where the cellular operators are directed to sell the sim cards at a minimum price of PKR. 200 which were easily available for free previously (Zaib, 2017).

Since these government regulations are influencing the cellular service consumers' behaviour in Pakistan, there is a need to conduct an empirical study to enhance existing literature on this issue.

1.3 Problem Statement

Cellular companies around the globe are under immense pressure to provide better and faster services to keep their customers loyal. According to Jen Palmer from T-Mobile cited in Vision Critical (2017), "If we don't provide the service our customers want, expect and deserve, they can leave us." So customer loyalty is of obvious interest for cellular service providers globally for their success and survival.

The consumers of the cellular service sector of Pakistan can choose between several cellular operators and can easily switch between operators. Considering this hyper-competitive environment, the consumers demand high quality services at a low price, whereby the cellular operators are continuously focusing on the customer acquisition. However, acquiring new customers is more costly compared to retaining the existing customers (Ali et al., 2010; Nasir et al., 2014) in the cellular market of Pakistan with a high penetration rate of 70.83 % (Pakistan Telecommunication Authority, 2017c) so

customer loyalty has become even more important than customer acquisition. Hence, keeping the customer loyal is number one pain for cellular service providers to stay profitable in Pakistan (Chattha et al., 2016; Raza & Rehman, 2012; Sabir et al., 2013).

According to Haq (2013), the cellular service sector of Pakistan is facing as high as 18-20% churn on average. In addition, cellular sector faced high inclination toward utility of mobile number portability (MNP) (Iqbal, 2010) along with low switching cost which promotes switching among cellular consumers (Saeed, Lodhi, et al., 2013; Shujaat, Syed, & Ahmed). These challenges intensify the issue of lack of loyalty in the cellular service sector of Pakistan (Hassan, Hassan, Nawaz, & Aksel, 2013). This is evident by investigating the recent five-year subscribers' net addition in the cellular sector of Pakistan in table 1.3. the statistics fact show that three out of five cellular operators have negative net additions and they lose customers as their customers switch to another cellular service provider. Mobilink, the leading cellular provider in Pakistan, had lost 2.8 million consumers in 2009 and 5.3 million consumers in 2015. Ufone had to face a churn of .45 million, .19 million customers and 6.5 million in 2010, 2014 and 2015 respectively. The highest churn in aggregate is confronted by Warid Telecom with the loss of .95, 3.8, .79 aand 3.2 million consumers in 2010, 2012, 2014 and 2015 respectively (Pakistan Telecommunication Authority, 2015). These statistics reveal the lack of loyalty among the cellular customers of Pakistan.

Similarly, the changing market share of cellular service providers in recent five years advocates volatility in the cellular sector with lack of customer loyalty. These changes in market share can be seen in table 1.4. The red highlighted percentages mentioned the decreasing market share compared to previous year.

Table 1. 3
Year on Year Net Addition of Cellular Subscribers

Operator	2009	2010	2011	2012	2013	2014	2015
Mobilink	-2895524	3065708	1175614	2575273	1168437	1646475	-5344078
Telenor	2767940	2905092	2868858	3296644	3552100	3058687	-5080557
Ufone	1904267	-455607	984687	3363474	678767	-0.19527	-6543402
Warid	2396878	-955049	456111	-3887962	-793482	378470	-3254203
Zong	2435813	317717	4223405	5909290	4207336	6152729	-5094080

Source: Pakistan Telecommunication Authority (2015).

It is evident from the given data that Mobilink continuously loses market share in the Year 2011, 2012, 2013 and 2014. Likewise, Ufone's market share dropped in the year 2011, 2013, 2014, 2015, 2016n and 2017. Similarly, Zong's market share dropped in the year 2015 and 2016. Warid also lost its market share constantly in the year 2011-2017. Only Telenor shows positive growth in recent seven years.

Table 1. 4
Market Share of Cellular Service Providers

Operator	2010	2011	2012	2013	2014	2015	2016	2017
Mobilink	32.50%	30.70%	29.90%	28.90%	27.70%	29.20%	29.36%	31.22%
Telenor	23.90%	24.40%	24.90%	26.10%	26.10%	27.50%	28.54%	29.20%
Zong	6.80%	10.00%	14.00%	16.40%	19.40%	19.30%	18.95%	20.10%
Ufone	19.70%	18.90%	19.90%	18.60%	17.40%	15.50%	14.89%	13.16%
Warid	17.10%	16.00%	11.20%	9.90%	9.30%	8.60%	8.27%	6.32%

Source: Pakistan Telecommunication Authority (2017b).

Furthermore, to address the issue of lack of loyalty various authors proposed and studied diversified models of customer loyalty in cellular service sector (Asiamah, Quaye, & Nimako, 2016; Hafez & Akther, 2017; Jahanzeb, Fatima, & Khan, 2011; Kim, Park, & Jeong, 2004; Morgan & Govender, 2017; Raza & Rehman, 2012;

Shahzad & Kausar, 2016). In the same vein, contemporary authors used Oliver's (1999) four-stage loyalty model to investigate the direct determinants of customer loyalty including mediating effects in the cellular service sector (Alim & Ozuem, 2014; Asiamah et al., 2016; Karunaratne & Jing, 2017). According to Oliver's four-stage loyalty model (1999), first of all, a customer develop cognitive loyalty where the customer looks for the functional characteristic of product or service and make a cost-benefit analysis. These characteristics include perceived service quality (Han & Hyun, 2012; Jahanzeb et al., 2011; Matthews, Son, & Watchravesringkan, 2014; Thaichon & Quach, 2015; Yeng & Mat, 2013), perceived value (Han & Hyun, 2012; Jahanzeb et al., 2011; Matthews et al., 2014; Yeng & Mat, 2013), sales promotion (Asiamah et al., 2016; Yeng & Mat, 2013), perceived CSR (Balqiah & Setyowardhani, 2011; Plewa, Conduit, Quester, & Johnson, 2015) done by service provider in order to attract the customers. The second stage of customer loyalty is affective loyalty which is stronger than the first stage. Here consumer develops a favourable attitude towards the seller by developing satisfaction (Fraering & Minor, 2013; Jahanzeb et al., 2011; Thaichon & Quach, 2015; Yeng & Mat, 2013; Yuksel, Yuksel, & Bilim, 2010). So customer satisfaction is a necessary element to enter into the third stage of customer loyalty which is conative loyalty (Jin, Line, & Merkebu, 2015; Matthews et al., 2014). At this stage, customer develops attitudinal loyalty where he develops a desire to make a purchase and this desire is backed by trusting the seller. So at this stage customer develops trust on the service provider (Jin et al., 2015; Thaichon & Quach, 2015) and ultimately enters the fourth stage of customer loyalty which is action loyalty. Here the customer shows behavioural loyalty where the customer recommends the service provider to others and intends to purchase the same services ignoring the competitor's offerings. The four-

stage model of customer loyalty claims that loyalty develops after passing through all four stages. Hence customer satisfaction and customer trust play the role of mediators to reach the fourth stage of loyalty. Previous studies on customer satisfaction (Deng, Lu, Wei, & Zhang, 2010; Han & Hwang, 2014; Islam, Haider, & Saeed, 2013; Pérez & Bosque, 2015) and customer trust (Dahiyat, Akroush, & Lail, 2011; Karjaluoto, Jayawardhena, Leppäniemi, & Pihlström, 2012; Martínez & Bosque, 2013) also supports this notion.

Though many authors have used Oliver's four-stage loyalty model in literature to study the phenomenon of customer loyalty as mentioned above however there are some unknown mechanisms associated with customer loyalty, which require further investigation. Only a handful of studies for example Bishop (2013) and Kumar, Sharma, Shah, and Rajan (2013) have specifically highlighted the moderating role of government regulations for affecting customer loyalty. This notion further gained support by Dick and Basu (1994) who have highlighted the moderating role of situational factors for developing customer loyalty. Furthermore, a group of researchers, Evanschitzky and Wunderlich (2006), Han and Hyun (2012) and Han, Kim, and Kim (2011) have studied the phenomenon of customer loyalty in the light of Oliver's four-stage loyalty model and have suggested to include the role of a moderator to extend and refine the existing loyalty models. Evanschitzky and Wunderlich (2006) further stressed that moderating variable would cause to enhance the robustness of Oliver's four stage loyalty model. Since, there is lack of empirical studies to address the mediating effect of customer satisfaction and customer trust and moderating role of government regulations on customer loyalty in the cellular service sector of Pakistan

(Abbasi, khuhawar, Khumbhati, & Khuhawar, 2016). It remained an open question to be answered and investigated further.

The scarcity of literature on the moderating role of government regulations for generating customer loyalty is regrettable. So this study helps to understand the current challenges faced by cellular service providers for keeping customers loyal in the presence of government interventions with the support of the nudge theory. It also helps the government to understand the importance and influence of its role on the behaviour of cellular consumers and pave the road for developing and upgrading the cellular policies in future.

1.4 Research Questions

The research questions are designed to address the issues discussed in problem statement as to what are the direct determinants of customer loyalty in the cellular sector of Pakistan, the mediating effect of customer satisfaction, and customer trust and the influence of government regulations as a moderator on consumers' loyalty and its direct determinants. Following are the research questions raised in this study.

1. Are perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction and customer trust direct determinants of customer loyalty?
2. Are perceived service quality, perceived value, sales promotion, and perceived corporate social responsibility direct determinants of customer satisfaction?

3. Are perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer satisfaction direct determinants of customer trust?
4. Does customer satisfaction mediate the relationships between perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer loyalty?
5. Does customer trust mediate the relationships between perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer loyalty?
6. Do the government regulations moderate the relationship of customer loyalty and its direct determinants (perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction and customer trust)?

1.5 Research Objectives

The main objectives of this study are to explore the direct determinants of customer loyalty, customer satisfaction and customer trust in the cellular service sector of Pakistan, the mediating effect of customer satisfaction, and customer trust and the moderating effect of government regulations. So the objectives are given as follows:

1. To study perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction, and customer trust as direct determinants of customer loyalty.

2. To study perceived service quality, perceived value, sales promotion, and perceived corporate social responsibility as direct determinants of customer satisfaction.
3. To study perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer satisfaction as direct determinants of customer trust.
4. To study the mediating effect of customer satisfaction between the relationships of perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer loyalty.
5. To study the mediating effect of customer trust between the relationships of perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer loyalty.
6. To study the moderating effect of government regulations between customer loyalty and its direct determinants (perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction and customer trust).

1.6 Scope of the Study

This study is confined to the cellular sector of Pakistan. It focuses on the prepaid customers of the cellular sector because the proportion of prepaid customers in the cellular sector of Pakistan is high since the beginning. It was as high as 98% in the year 2011 (Pakistan Telecommunication Authority, 2011b) and still high at 97% of total cellular subscriber base (Butt, 2015). The data is collected from the capital cities of each province which are Lahore (Punjab), Karachi (Sindh), Quetta (Baluchistan) and Peshawar (KPK). Furthermore, this study extends Oliver's four stage loyalty model in

prepaid cellular sector of Pakistan and incorporated the Nudge theory in customer loyalty literature. In addition, it signifies service quality, sales promotion and government regulations as formative constructs and provide opportunity for future studies to avoid model misspecification while operationalization the constructs.

1.7 Significance of the Study

1.7.1 Theoretical Significance

This research provides some key theoretical contributions regarding customer loyalty to the existing body of knowledge in numerous ways. The past loyalty models based on Oliver's four-stage customer loyalty model (1999) includes stages as cognitive loyalty, affective loyalty, conative loyalty and action loyalty. However, those existing loyalty models lacked to address any external or situational factor affecting customer loyalty. According to Perugini and Bagozzi (2001) and Jahanzeb et al. (2011) incorporating the changes in a model for a particular case and context helps to broaden the understanding of the theoretical mechanism of a model and increased the capabilities of predicting the outcomes of a model in that particular context. So this study by including government regulations as a moderator tries to reduce the existing gap in literature as cellular service sector of Pakistan is facing new challenges due to the emerging role of government in this sector. So this study with the help of empirical investigation improves the existing customer loyalty models.

Moreover, past studies show that Oliver's four-stage loyalty model has been rarely used in the cellular service sector (Alim & Ozuem, 2014; Asiamah et al., 2016; Karunarathne & Jing, 2017). It is more frequently used and studied in hospitality and tourism industry (Han & Hwang, 2015; Han & Hyun, 2012; Jahanzeb et al., 2011; Jin et al., 2015) and

retail industry (Matthews et al., 2014; Roy, Butaney, & Bhutaney, 2009; Roy, Eshghi, & Quazi, 2014; Yeng & Mat, 2013). Since there is a scarcity of literature on the application of Oliver's four-stage loyalty model in the cellular sector so this study increases the body of knowledge and fill this existing gap in the literature.

In addition, most of the studies on Oliver's four-stage customer loyalty model applied in the United States (Fraering & Minor, 2013; Han & Hwang, 2015; Han & Hyun, 2012; Jahanzeb et al., 2011; Jin et al., 2015; Matthews et al., 2014), in UK (Alim & Ozuem, 2014), in Turkey (Yuksel et al., 2010), in Ghana (Asiamah et al., 2016), in Thailand (Thaichon & Quach, 2015) and in Malaysia (Yeng & Mat, 2013). There is no prior study which used Oliver's four stage loyalty model to study the customer loyalty and its direct and indirect determinants in the cellular service sector of Pakistan. So this study is an addition to existing literature which used Oliver's four-stage loyalty model (1999) as an underpinning theory in the cellular sector of a developing country: Pakistan.

Furthermore, perceived corporate social responsibility has been studied as a determinant of customer loyalty in many sectors such as hotel industry, banking, retail markets, hospitals etc. For example Barcelos et al. (2015), Mandhachitara and Poolthong (2011) in banking, Su, Huang, van der Veen, and Chen (2014) and Martínez and Bosque (2013) in the hotel industry. Few studies have been conducted in the cellular sector to explore the influence of perceived CSR activities on customer loyalty in Pakistan (Ali et al., 2010; Irshad, Rahim, Khan, & Khan, 2017; Sindhu & Arif, 2017) and non-Pakistan settings (Kodua & Mensah, 2017; Onlaor & Rotchanakitumnuai, 2010; Salmones, Crespo, & del Bosque, 2005). Though cellular service sector is

actively performing CSR activities in Pakistan (Dawn, 2013; Khan, 2012), there is lack of extensive empirical research on addressing the influence of CSR as a direct and indirect determinant of cellular customer loyalty in existing literature. Hence this study extends the body of knowledge on the predictors of customer loyalty in the cellular service sector.

Furthermore, the impact of government regulations on consumer behaviour has been addressed by behavioural economists Sunstein and Thaler (2008) who proposed nudge theory to address the impact of the government policies on consumer behaviours. So, this study used this concept of the nudge to understand the influence of government regulations on cellular consumers' loyalty. The use of behavioural economics in customer loyalty model refinement is a new contribution towards the marketing literature. Hence, the applicability of nudge in this study is an attempt to enhance the existing literature and pave foundations for future studies.

Lastly, this study is one of those scarce studies on the cellular sector of Pakistan which used advanced quantitative analysis technique as structural equation modelling for analysing the customer loyalty model using the two-stage approach with PLS software.

1.7.2 Practical Significance

The focus of this study is to investigate the direct and indirect determinants of customer loyalty with moderating role of government regulations in the cellular sector of Pakistan. The findings of this study are very useful for marketers, government and consumers. Specific contributions to each sector are given below

1.7.2.1 Contribution to Cellular Sector Marketers

The cellular sector marketers get new insights about the direct and indirect determinants of customer loyalty, especially those key factors which help to generate loyalty for the prepaid cellular customers of Pakistan. Furthermore, the study informs and guide the marketers on what are the significant determinants that they should focus on in order to keep the customers loyal. So eventually this study spotlights the needs and wants of cellular customers for example: either customers are more quality oriented or value-oriented, are they more demanding for perceived corporate social responsibility or sales promotions. The cellular service providers can focus on those factors which are most demanded by customers and can provide the products and services that best match to the needs of cellular customers.

It further highlights the process by which loyalty can be developed in cellular consumers indirectly via satisfaction and trust. So, this study also guides the marketers to know how to satisfy cellular customers and develop trust among them, and how to translate this phenomenon into customer loyalty through effective marketing strategies.

Additionally, this research helps to utilize scarce resources of organizations on only those determinants which are most valued by customers e.g. choosing between corporate social responsibility and sales promotions. Hence, this study provides a roadmap for the marketers to reach the destiny of customer loyalty in a better way efficiently.

1.7.2.2 Contribution to Government and Policy Makers

Additionally, this study guides the policymakers and the government to develop those policies which can promote a more quality oriented environment where customer satisfaction, trust and loyalty are key factors to be taken care off. Since this study also highlights the impact of government regulations on cellular consumers loyalty, it provides key insights to government and policy makers about the impact and effectiveness of their existing regulations on cellular consumers. It also provides a feedback on the existing government regulations in the cellular sector of Pakistan and provides an opportunity to the policy makers to review and improve the existing policies. Hence, this study is extending the horizon of the policy making for government to consider the customers as an important stakeholder for their regulations' planning and implementation.

1.7.2.3 Contribution to Cellular Consumers

Moreover, this study pointed out the determinants of customer satisfaction, trust and loyalty. Keeping these things under consideration, the cellular service providers are expected to win satisfaction and trust and eventually loyalty of their customers. These customer oriented offerings are further expected to help the customers to get rid of the hassle of switching from one service provider to another.

Since the role of government regulations is highlighted in the cellular sector of Pakistan, so this study is expected to increase cellular consumers' awareness about the recent regulations of government and it's objectivity for consumers' well-being.

1.8 Organization of Thesis

This thesis is systematized into five chapters. Chapter 1 outlines the background, problem statement, research questions, research objectives, scope and significance of the study.

Chapter 2 starts with the underpinning theories. Further, it provides an extensive review of literature about customer loyalty models in the cellular sector which include the direct and indirect determinants of customer loyalty. Past studies on the mediating effect of customer satisfaction, trust and the moderating effect of government regulations are also explained in detail. It ends up by describing the research framework.

Chapter 3 focuses on the explanation of research methodology, which begins with operational definitions and research design. It further elaborates the pilot study, data screening and data analysis method.

Chapter 4 explains the statistical analysis, which starts with response rate, data screening, demographics analysis, characteristics of cellular service consumers and descriptive analysis. Afterwards, the measurement model, as well as the structural model which are assessed using the Smart PLS version 3.2.7 software package, are reported. Consequently, results of the hypotheses based on the assessment of the structural model are reported.

Chapter 5 discusses the research findings based on the research objectives. Furthermore, the chapter provides the theoretical and practical contributions and implications of the findings of this study. Later, the chapter describes the limitations of

research and suggests directions for future research. Lastly, the conclusion of the research is presented.



CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter starts with discussing the underpinning theories used to explain the phenomenon of customer loyalty and the constructs under study. Later, this chapter discusses the literature review of customer loyalty and reviews the direct determinants of customer loyalty, mediating and moderating effects on customer loyalty in the cellular sector of Pakistan. It ends up discussing the research framework.

2.2 Underpinning Theories

To study the direct determinants of customer loyalty, mediating and moderating effects this study used Oliver's four-stage loyalty model as underpinning theory and the nudge theory as a supporting theory.

2.2.1 Oliver's Four Stage Loyalty Model

For developing the theoretical understanding of the direct and indirect determinants of customer loyalty, Richard L. Oliver, (1999) four-stage loyalty model provides a conceptual understanding.

Oliver (1999) proposed four-stage loyalty model to understand the mechanism of loyalty in service industries. According to Oliver (1999), customer loyalty is developed in four stages which are cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. The first three components are identified as attitudinal loyalty, while the last component of action loyalty is identified as behavioural loyalty.

The first stage is cognitive loyalty. Cognitive loyalty is the information base where consumers look for costs, benefits, functional characteristics and quality during their purchasing decision process. At this stage, the consumers can switch from one seller to another, which offers better prices and benefits. In other words, the loyalty is based on the value proposition from seller to the customers. Customers at this stage are believed to build loyalty based on information about the brand. At this stage loyalty is considered very minimal, hence the weakest type of loyalty (Oliver, 1999). Although this is weak loyalty, this stage becomes the basis for the next three loyalty stages. As suggested by Oliver (1999) and a group of authors perceived service quality (Han & Hyun, 2012; Jahanzeb et al., 2011; Matthews et al., 2014; Thaichon & Quach, 2015; Yeng & Mat, 2013), perceived value (Han & Hyun, 2012; Jahanzeb et al., 2011; Matthews et al., 2014; Yeng & Mat, 2013), sales promotion (Asiamah et al., 2016; Yeng & Mat, 2013), perceived CSR (Balqiah & Setyowardhani, 2011; Plewa et al., 2015) comes under cognitive loyalty. So based on literature, this study considered perceived service quality, perceived value, sales promotion, perceived CSR under cognitive loyalty.

The second stage is affective loyalty. It is stronger than cognitive loyalty because affective loyalty is derived from cognitive loyalty (Oliver, 1999). Affective loyalty uncovers favourable attitude towards the seller as an outcome of satisfying usage occasions. It includes both liking and experiencing satisfaction. Oliver (1997) argues that satisfaction is a function of disconfirmation, performance, and expectations. Nevertheless, this type of loyalty is subjected to switching and considered weak, as past studies have shown satisfied customers need not necessarily remain loyal (Adeleke & Suraju, 2012; Adoyo et al., 2012; Boohene & Agyapong, 2011; Edward, George, & Sarkar, 2010; Muturi, Jackline Sagwe, Kipkirong Tarus, & Rabach, 2013). According

to Oliver (1999) affective loyalty is explained through customer satisfaction (Fraering & Minor, 2013; Jahanzeb et al., 2011; Thaichon & Quach, 2015; Yeng & Mat, 2013; Yuksel et al., 2010). So this study includes customer satisfaction as affective loyalty.

The third stage is conative loyalty. It is deeper than the previous two stages. Once the consumer perceives the value in the cognitive stage and obtains satisfaction in the affective stage, then develops a positive attitude toward the seller supported with a desire to intend an action in the conative stage of loyalty. Since customer trust is defined as the customer's perception of honesty, reliability, responsibility, and motives/intentions of the service provider (Smith, 1997). So the willingness to rely on and expecting that the relationship with the service provider will yield intended positive outcome does, in fact, reflecting the conative side of loyalty. The importance of trust for generating loyalty is also highlighted by Reichheld and Scheffer (2000) as: *"loyalty is still about earning the trust of the right kinds of customers, customers for whom you can deliver such a consistently superior experience that they will want to do all their business with you"* (Reichheld & Scheffer, 2000, p. 106).

Moreover, previous research which used four-stage loyalty model also studied customer trust at the third stage of customer loyalty (Jin et al., 2015; Matthews et al., 2014). So this study considered trust as conative loyalty.

Eventually, positive attitude toward service provider is converted to action so the last stage is action loyalty. At this stage, the customer would translate behaviour intentions to actual behaviour together with a willingness to overcome hindrances to such action (Kaur & Soch, 2012). Customers, once achieve the action loyalty phase, are expected to 'tune out' competitive messages or go in search of alternative brands, leave aside testing it (Oliver,

2014). This study adds customer loyalty at action loyalty stage of Oliver four-stage customer loyalty model.

An extensive review of past studies declares that research on Oliver's four-stage loyalty model in the cellular setting is scarce. Most of the studies are conducted in hotel or restaurant industry (Han & Hyun, 2012; Jahanzeb et al., 2011; Jin et al., 2015; Lee, Back, & Park, 2017), in tourism (Han & Hwang, 2015; Yuksel et al., 2010), in retail industry (Coelho do Vale & Verga Matos, 2017; Matthews et al., 2014; Roy et al., 2009; Yeng & Mat, 2013), in banking (Fraering & Minor, 2013; Miguens & Vázquez, 2017) and in electronic commerce (Roy et al., 2009; Roy, Butaney, Sekhon, & Butaney, 2014; Thaichon & Quach, 2015) to identify the determinants of customer loyalty. A few studies have been conducted in cellular setting (Alim & Ozuem, 2014; Asiamah et al., 2016). This claims a lack of use of Oliver's four-stage loyalty model in cellular sector. Moreover most of the studies on customer loyalty while using Oliver's four-stage loyalty model have been conducted in the United States (Fraering & Minor, 2013; Han & Hwang, 2015; Han & Hyun, 2012; Jahanzeb et al., 2011; Jin et al., 2015; Matthews et al., 2014; Roy et al., 2009; Roy, Butaney, et al., 2014), in Turkey (Yuksel et al., 2010), Ghana (Asiamah et al., 2016), Malaysia (Yeng & Mat, 2013), in UK (Alim & Ozuem, 2014), in Thailand (Thaichon & Quach, 2015). These findings call for research in another geographic setting like Pakistan's cellular sector. Summary of the past studies using Oliver's four-stage loyalty model has been given Appendix A.

2.2.2 The Nudge Theory

In the formulation of a theoretical perspective for studying the moderating role of government regulations on customer loyalty, the nudge theory provides a useful

prototype. This theory was proposed by behavioural economist Richard Thaler and legal scholar Cass Sunstein (2008) which outlines the influence of government regulations and policy-making on shaping the people's behaviour (Kosters & Van der Heijden, 2015).

According to Sunstein and Thaler (2008), a nudge is any factor, including government regulations, that significantly alters the behaviour of Humans. They further elaborate that it is legitimate for the government to try to influence people's behaviour in order to make their lives longer, healthier, and better. In other words, it is a self-conscious effort by the government to steer people's choices in directions that will improve their lives (Williams, 2016).

So, a nudge is the government regulation or intervention or support which helps to overcome the cognitive shortcomings of the consumers in making a choice or purchase or repurchase. Moreover, it also focuses on those features of products or services which are mostly ignored by the consumers while making a choice of purchase or repurchase (Rebonato, 2012; Yanoff & Hertwig, 2016).

Moreover, the government through its regulatory agencies traditionally focused on mitigating the harm imposed on individuals by misleading advertising, low service quality standards, poorly defined selling procedures etc. So according to nudge theory, the government tries to mitigate the effect of the factors that would reduce consumer welfare. So, governments increasingly began to intervene to "nudge" consumers toward "better" choices through regulation, arguing this improves consumer welfare. So, the restriction of consumer choices is then counted as a benefit rather than a cost of regulation (Koopman & Ghei, 2013).

The Nudge theory is practically implemented by the government of UK, which set up The Behavioral Insight Team also called the Nudge Unit to innovate and develop the policies to enable people to make better choices (Centre for Public Impact, 2016). This nudge unit works on almost all areas including telecommunication related issues. Recently this unit worked on the impact of racism (white and non-white) on police recruitment test and proposed to lessen the racism stereotyping with the help of government regulations/policy making amendment (Linos, Reinhard, & Ruda, 2017). The government make some amendments in recruitment policy and the findings suggest a significant positive impact of the policy on the non-white for passing the recruitment test. Similarly, another study applied the behavioural insights to government policy in the UK. The government of UK has introduced the policy of pensions auto-enrolment in the year 2012, after a year the results of this nudge was remarkable whereby the participation rose from 49 to 86% (Team, 2015; Thatcher, 2013). Similarly, USA formed a White House's Social and Behavioral Science Team (SBST), in the year 2015 to bring behavioural science research into the policymaking process (Vinik, 2015).

Apart from this, past literature also revealed that the nudge theory is used to study the consumer behavior toward the government intervention through policy-making regarding environmental concerns (Haq, Cambridge, & Owen, 2013) consumer purchase decision (Chapman & Ogden, 2012), product recommendation and retail purchase (Harris & Dennis, 2011).

Hence, this theory indicates that when the government regulate the cellular service sector of Pakistan, focusing on the service quality, value, sales promotions, corporate social responsibility, customer satisfaction and customer trust, those government

regulations will influence the consumer choices including customer loyalty to maximize their wealth.

2.3 Customer Loyalty

This section explains customer loyalty, which is dependent variable for this study. Though customer loyalty has been investigated many time, the interest in this topic remained undiminished until now. Marketers, as well as academicians, have renowned the prominence of developing customer loyalty for profitability, in the long run, the reason being loyal customers will help to generate encouraging recommendations and repeat purchase (Aksoy, Buoye, Aksoy, Larivière, & Keiningham, 2013; Morgan & Govender, 2017; Sindhu & Arif, 2017).

Literature suggests that customer loyalty has been defined differently by various authors (Izogo & Izogo, 2017). Tellis (1988) describes customer loyalty as frequent repurchase behaviour of consumers while Jone and Sasser (1995) define customer loyalty as “a feeling of attachment to or affection for a company's people, products, or services”. Also, Jone and Sasser (1995) described that there are three components of customer loyalty which are rebuying intentions, primary level behaviour and secondary level behaviour. According to them, repurchase intentions refers to the future repurchase of product or service, the primary behaviour is the actual revisiting behaviour of the consumer, while secondary level behaviour is referring the product or service to others in a positive manner. In the same vein, Oliver (1997, p. 392) defines loyalty as “a deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behaviour”. He demonstrated that customer

loyalty could foster customer retention as loyal customer possibly make repeat purchases, give references, referrals and generate positive word of mouth in public.

Review of the extant literature reveals that there are three approaches to measure customer loyalty: behavioural loyalty, attitudinal loyalty, and composite loyalty (Santouridis & Trivellas, 2010). Attitudinal loyalty states the psychological attachment and attitudinal attachment of a customer toward the seller (Chaudhuri & Holbrook, 2001). Moreover, it is based on the stated preferences and commitment, distinguish loyalty from repeat buying. Attitudinal loyalty helps the seller to know the motives behind the purchase of the product or service by a customer, even if the customer buys the product or services of a competitor. It also helps to find out the strength and weaknesses of their products or service offerings (Bandyopadhyay & Martell, 2007).

Behavioural loyalty suggests that the repurchase behaviour of a consumer shows his loyalty toward that product or services. This approach considered loyalty as a behaviour and the customers who buy the same product or service repeatedly are considered as the loyal customers of that product or service (Odin, Odin, & Florence, 2001). This approach is usually measured by observing the sequence of buying, the proportion of buying and the likelihood of buying. (Dekimpe, Mellens, Steenkamp, & Vanden Abeele, 1996; Sheth, Mittal, Newman, & Sheth, 2004). The benefit of behavioural loyalty is that it's measurable, there is an action (of purchasing) which can be observed and help the marketers to understand the loyalty of customers (Odin et al., 2001; Rundle-Thiele, 2005). Additionally, behavioural loyalty is based on the repeat purchase behaviour which is not incidental (Dekimpe et al., 1996).

Both behavioural and attitudinal components of loyalty are essential for understanding long-term relationships with the customer (Dick & Basu, 1994). The composite approach of loyalty considers customer’s intentions, favourable attitudes, and repeat purchasing as measures of true loyalty (Rundle-Thiele, 2005; Shoemaker & Lewis, 1999).

According to Oliver (1999) four-stage loyalty model, the concept of customer loyalty is understood as a combination of customers’ favourable attitude and the behaviour of repurchase and favourable recommendations to other despite situational influences (Kim et al., 2004). This study operationalized customer loyalty based on the composite approach whereby, attitudinal loyalty is explained via first three phases of cognitive-affective-conative phases and customer loyalty is explained with the help of behavioural loyalty. Additionally, Cheng (2011) while comparing attitudinal and behavioural loyalty models found that behavioural loyalty outperforms attitudinal measure of loyalty.

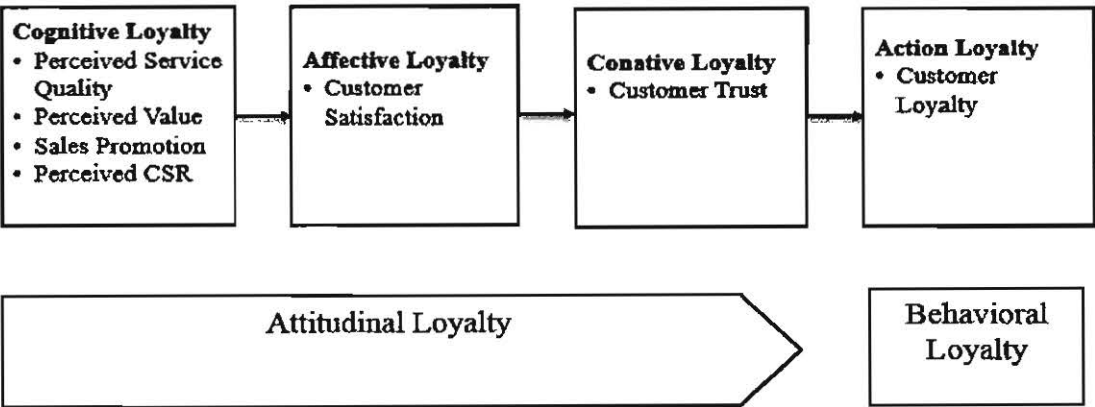


Figure 2. 1
Customer Loyalty Operationalization based on Oliver (1999)

Additionally, Peppers and Rogers group (2012) (an international management consulting firm) also claims that behavioural measure of customer loyalty is more useful and practical as it focuses on consumers' actual conduct. Keeping in view the importance of the behavioural aspect of loyalty, this study focused on the behavioural component of customer loyalty. While the attitudinal loyalty is measured by previous three stages in the proposed research framework by using Oliver's four-stage loyalty model.

2.3.1 Determinants of Customer Loyalty in Cellular Setting

Determinants of customer loyalty in cellular sector mostly include perceived service quality, perceived value, sales promotion, perceived corporate social responsibility customer satisfaction and customer trust. However, many of these studies were unclear about the respondents whether they belong to prepaid segment or postpaid segment. Moreover, a few of them studied the effect of intervening variables on customer loyalty. Among other variables being investigated in the cellular sector are given in table 2.1.

Table 2. 1
Summary of Determinants of Customer Loyalty in Cellular Service Setting

Author	Country	Independent Variables	Mediator	Moderator	Analysis
Morgan and Govender (2017)	South Africa	Image, Perceived Service Quality, Perceived Value	Customer Satisfaction	Nil	SEM
Hernandez-Ortega et al. (2017)	Greece and Spain	Perceived Value, Customer Satisfaction	Nil	Culture	SEM
Giovanis and Tsoukatos (2017)	Greece	Sacrifices, Perceived Service Quality, Switching Cost, Attraction of Alternatives	Perceived value, Customer Satisfaction, Corporate Image	Nil	SEM

Author	Country	Independent Variables	Mediator	Moderator	Analysis
Izogo and Izogo (2017)	Nigeria	Perceived Service Quality	Commitment	Nil	SEM
Ukpabi, Karjaluoto, Ikaba, and Piabari (2017)	Nigeria	Perceived Service Quality, Perceived Value, Customer Satisfaction, Customer Trust	Nil	Nil	ANOVA
Karunaratne and Jing (2017)	Sri Lanka	Call Clubs Effects	Nil	Age, Income, Education	SEM
Hafez and Akther (2017)	Bangladesh	Perceived Service Quality, Customer Satisfaction, Customer Trust, Corporate Image, Switching Cost	Nil	Nil	Multiple Regression Analysis
Kodua and Mensah (2017)	Ghana	Perceived Corporate Social Responsibility	Nil	Nil	Multiple Regression Analysis
Yeboah-Asiamah, Quaye, and Nimako (2016)	Ghana	Sales Promotion,	Affective Loyalty, Conative Loyalty	Nil	SEM
Izogo (2015)	Nigeria	Perceived Service Quality	Commitment	Nil	SEM
Abdullah, Putit, and Teo (2014)	Malaysia	Brand Reputation, Alternative Attractiveness, Customer Trust, Emotions	Nil	Nil	SEM and Interviews
Adjei and Denanyoh (2014)	Ghana	Sales Promotions, Price, Perceived Service Quality, Customer Trust, Call Quality, SMS Quality, GPRS Rate, Network Coverage, Signal Strengths, Call Rates, Value Added Services, Customer Care, Brand Image, Switching Cost, Customer Satisfaction	Nil	Nil	Descriptive and Correlation Analysis

Author	Country	Independent Variables	Mediator	Moderator	Analysis
Oghojafor, Ladipo, Ighomereho, and Odunewu (2014)	Nigeria	Product, Price, Distribution, Sales Promotion, Customer Services, Customer Trust, Commitment, Social Networks, Customer Satisfaction	Nil	Nil	Regression Analysis
Awan and Iqbal (2014)	Pakistan	Perceived Service Quality, Brand Image, Value Offers, Price Perception	Nil	Nil	Correlation and Regression Analysis
Minarti and Segoro (2014)	Indonesia	Customer Satisfaction, Switching Cost, Customer Trust	Nil	Nil	Regression Analysis
Floh, Zauner, Koller, and Rusch (2014)	Austria	Perceived Value	Nil	Nil	Regression Analysis
Hossain and Suchy (2013)	Bangladesh	Communication, Price, Tariffs, Value Added Services, Convenience, Sales Promotion, Customer Services	Nil	Nil	Regression Analysis
Segoro (2013)	Indonesia	Perceived Service Quality, Mooring Factors, Quality Of Relationship, Customer Satisfaction	Nil	Nil	SEM
Chen and Cheng (2012)	Taiwan	Perceived Service Quality	Satisfaction and Value	Nil	SEM
Hassan, Malik, and Faiz (2012)	Pakistan	Over All Service Quality, Tangibles, Reliability, Responsiveness, Assurance, Empathy, Network, Convenience	Nil	Nil	Correlation Analysis
Karjaluoto, Jayawardhena, Leppäniemi, and Pihlström (2012)	Finland	Perceived Value	Customer Trust	Nil	SEM

Author	Country	Independent Variables	Mediator	Moderator	Analysis
Raza and Rehman (2012)	Pakistan	Perceived Service Quality, Price Perception, Brand Image, Customer Satisfaction, Customer Trust	Nil	Nil	SEM
Lee, Lee, and Li (2012)	South Korea	Perceived Service Quality, Customer Satisfaction	Perceived Value, Perceived Price and Perceived Switching Cost	Nil	Hierarchical Regression Analysis
Amin, Ahmad, and Hui (2012)	Malaysia	Perceived Service Quality, Corporate Image, Customer Trust, Switching Cost	Nil	Nil	Multiple Regression
Boohene and Agyapong (2011)	Ghana	Corporate Image, Service Quality	Customer Satisfaction	Nil	Multiple Regression
Khokhar et al. (2011)	Pakistan	Customer Satisfaction	Customer Trust	Nil	Regression Analysis
Omotayo (2011)	Nigeria	Sales Promotion	Nil	Nil	Regression Analysis
Jahanzeb, Fatima, and Khan (2011)	Pakistan	Perceived Service Quality, Customer Trust, Switching Cost, Staff Loyalty	Nil	Nil	Regression Analysis
Hafeez and Hasnu (2010)	Pakistan	Price, Perceived Service Quality, Customer Satisfaction, Corporate Image	Nil	Nil	Regression Analysis
Onlaor and Rotchanakitumnuai (2010)	Thailand	CSR, Price Fairness, Customer Satisfaction	Nil	Nil	Regression Analysis
Deng, Lu, Wei, and Zhang (2010)	China	Customer Trust, Perceived Service Quality, Perceived Value, Functional Value, Emotional Value, Social Value, Monetary Value, Switching Cost	Customer Satisfaction	Nil	SEM

Author	Country	Independent Variables	Mediator	Moderator	Analysis
Lee (2010)	Korea	Perceived Service Quality, Sacrifice	Perceived Value, Customer Satisfaction	Nil	SEM

Source: Compiled by Author

2.3.2 Issues Related to Customer Loyalty in Cellular Service Sector of Pakistan

In Pakistan, the most important factors that affect customer loyalty directly or indirectly, include perceived service quality, perceived value, sales promotions, perceived corporate social responsibility, customer satisfaction, customer trust and government regulations. The importance of these determinants is discussed one by one as below.

According to, Sabir et al. (2013), Ahmad and Usman (2011) and Chattha et al. (2016) perceived service quality is the most import direct determinant of customer loyalty in the cellular service sector of Pakistan. However, the cellular service sector is still lagging behind to maintain the quality of services for cellular consumers (Attaa, 2016; A. Khan, 2016b).

Similarly, perceived value is also an important determinant of customer loyalty in Pakistan's cellular service sector. A group of researchers, for example, Ali, Leifu, Yasir Rafiq, and Hassan (2015), Nasir et al. (2014) and Ishaq (2012) have highlighted the importance of perceived value for inculcating loyalty among cellular consumers of Pakistan. So, it is important to study perceived value for generation of customer loyalty in the cellular sector of Pakistan.

Furthermore, sales promotions are playing a viable role in the cellular service sector of Pakistan. According to PTA annual reports (2013, 2017b) and R. Khan (2016) sales promotions are aggressively used in Pakistan by cellular service providers to retain the existing consumers and to win the new subscribers. However, there are concerns regarding their transparency for overcharging and hidden charges embedded in the sales promotions in the cellular sector of Pakistan (Chohan, 2010; Pakistan Telecommunication Authority, 2017b).

Moreover, Corporate social responsibility is an emerging concept in the cellular service sector of Pakistan (Bhatti, 2007; Rahman, 2015). It is gaining attention by all the cellular service providers in Pakistan due to its proximity to customer loyalty (Khokhar et al., 2011). However, the government is not satisfied with the participation of cellular service providers and demand more participation from cellular service sector to the corporate social responsibility in Pakistan (Rahman, 2015).

Similarly, customer trust and customer satisfaction have been considered very important for developing loyalty among cellular consumers in Pakistan (Ahmad & Usman, 2011; Ahmad, Hussain, & Rajput, 2015; Danish, Ahmad, Ateeq, Ali, & Humayon, 2015; Nasir et al., 2014; Sabir et al., 2013).

However, there is lack of empirical studies in the cellular service sector of Pakistan to address these phenomena of perceived service quality, perceived value, sales promotions, perceived corporate social responsibility, customer satisfaction, customer trust and customer loyalty.

Simultaneously, the increasing influence of government regulations to ensure quality of services (Mehran, 2017), increase transparency of sales promotions to clearly communicate the value of cellular offerings (Pakistan Telecommunication Authority, 2017b; Pakistan Today, 2016) and corporate social responsibility participation (Rahman, 2015) in cellular service sector of Pakistan is understudied empirically. So, keeping in view the current issues related to customer loyalty in the cellular sector of Pakistan, this study incorporate these above-mentioned constructs to understand the phenomenon of customer loyalty.

2.4 Direct Determinants of Customer Loyalty

2.4.1 Perceived Service Quality and Customer Loyalty

The existing body of knowledge on loyalty have proven that perceived service quality is an important element to pave business performance especially in the long run to reduce churn and eventually gain loyalty (Alnsour, Abu Tayeh, & Alzyadat, 2014; Izogo & Ogba, 2015; Johnson & Sirikit, 2002; Premkumar & Rajan, 2017; Santouridis & Trivellas, 2010; Srinuan, Tsani Annafari, & Bohlin, 2011). In fact, achieving loyalty in a competitive industry through perceived service quality has been the guiding principle of service industry such as cellular sector (Morgan & Govender, 2017).

Previous studies on perceived service quality have stressed that SERVQUAL is not only a prominent scale but also widely used, accepted and good service quality model, successfully operationalized in several loyalty studies (Chadha & Kapoor, 2009; Khan, 2010; Lai, Hutchinson, Li, & Bai, 2007; Santouridis & Trivellas, 2010; Wong & Sohal, 2003). SERVQUAL initially developed on the basis of gap analysis. It was derived from the exploratory study of Parasuraman, Zeithaml, and Berry (1985) which clearly

revealed how customers make an assessment of service quality, by developing ten determinants as follows.

1. Access: easy to contact and approachable
2. Competence: possession of required skills and knowledge to perform the work
3. Courtesy: attitude, demeanour of contact personnel
4. Communication: listening and informing customers
5. Reliability: consistency of performance and dependability
6. Responsiveness: timeliness of service and willingness of employees
7. Credibility: trustworthiness and honesty
8. Security: freedom from danger, risk or doubt
9. Tangibles: physical evidence of service
10. Understanding and knowing the customers: making the effort to understand customers' needs.

The ten determinants went through series of refinement and produced Parasuraman, Zeithaml, and Berry (1988) scale, where the ten determinants were condensed to five by maintaining original determinants of tangibles, reliability and responsiveness whereas remaining seven determinants were regrouped as assurance and empathy. Even though Parasuraman et al. (1988) SERVQUAL's instrument was highly operationalized (Caruana, 2002; Mokhtar, Maiyaki, & Mohd Noor, 2011), subsequent literature has, in fact, criticized SERVQUAL. The criticism was mainly focused on shortcomings in defining a baseline of good service quality, measurement of expectations, gap score, and theoretical assumptions to operational perspective besides challenges to generalize (Buttle, 1996; Carman, 1990; Cronin & Taylor, 1992; Teas, 1994). Oliver (2014) has

also touched the concept of quality; prescribe in SERVQUAL by highlighting the several issues surrounding gap analysis. One of which is the measurement of perception against the expectation of quality where consumers can always seek for better quality instead of clinging to the perceived real-world offerings, hence posing challenges to measuring the gap. Therefore, merger of expectations and perceptions of SERVQUAL is more meaningful which were devised through numerous studies, successfully operationalize in various study settings such as cellular sector (Khan & Manthiri, 2012; Khan, 2010; Lai et al., 2007; Wang, Lo, & Yang, 2004), banks (Ladhari, Souiden, & Ladhari, 2011; Malik, Naeem, & Arif, 2011), departmental store (Wong & Sohal, 2003). The modified version, perceived service quality has gain better clarity, elevated reliability, validity and have continuously evolved to match various study settings and time dimension.

Hence, this study leverages on perceived service quality by merging expectations and perceptions into a single measure, likewise overcoming the challenges posed by gap analysis altogether. In short, the base of Parasuraman et al. (1988) SERVQUAL dimension is still maintained except for gap scores whereby this study will merge expectations and perceptions. Meanwhile, SERVQUAL is preferred after viewing the previous study by Bayraktaroglu and Atrek (2010) in comparing SERVQUAL and SERVPERF that showed even though both methods have good model fit; it was SERVQUAL that had an excellent model fit as compared to SERVPERF.

2.4.1.1 Studies on Perceived Service Quality and Customer Loyalty

Perceived service quality deemed to be an important determinant of customer loyalty in cellular and non-cellular service sectors (Makanyeza, Makanyeza, Chikazhe, &

Chikazhe, 2017; Morgan & Govender, 2017). Extant literature suggests that perceived service quality leads towards customer loyalty (Alnsour et al., 2014; Kiran & Diljit, 2017). It implies that better service quality in the form of visually appealing tangibles, reliable, responsive and empathetic employees develop assurance among consumers which leads toward customer loyalty.

Perceived service quality has been extensively studied as a positive determinant of customer loyalty in cellular and non-cellular service settings previously as mentioned in table 2.2. However, studies on perceived service quality and customer loyalty are full of heterogeneity regarding selecting sub-dimensions of SERVQUAL model. For example, Boohene and Agyapong (2011) used tangibles, reliability, responsiveness, competence, courtesy, security, access, communication, and understanding the customer to study the link between service quality with customer loyalty. Subsequently, Malik et al. (2011) studied service quality in the banking sector and omit responsiveness and reliability from the measurement model. Moreover, many authors like Santouridis and Trivellas (2010) used networks, value-added services, mobile devices, customer services, billing system and pricing structure to study service quality in relation to customer loyalty.

However, Lee (2010) used a uni-dimensional variable to study service quality in the cellular industry of Korea. Likewise, Lai, Griffin, and Babin (2009) and Anjum, Rizwan, Khaleeq, and Rasheed (2013) combined all five components of SERVQUAL and studied service quality as a unidimensional variable in Chinese and Pakistan cellular sector. However, Razavi, Safari, Shafie, and Khoram (2012) and Alnsour et al. (2014) studied perceived service quality with the help of five sub-dimensions.

Additionally, Izogo and Ogba (2015) also used SERVQUAL sub-dimensional approach, but they replace assurance with commitment.

Apart from this diversity, studies on perceived service quality also revealed mixed findings. In the study done by Alnsour et al. (2014), it was found that overall perceived service quality has a significant impact on loyalty in the cellular sector of Jordan and subsequent test of each SERVQUAL dimension's impact on loyalty, prove the dimensions to be significantly affecting loyalty. Similarly, Roy, Butaney, et al. (2014) tested overall service quality in Indian cellular sector and found that perceived service quality is positively significant with loyalty. Similar results are revealed by Makanyeza et al. (2017), Lai (2015), Izogo and Ogba (2015) in the banking sector, the restaurant industry and automobile industry respectively.

Table 2. 2
Summary of Past Studies on Perceived Service Quality and Customer Loyalty

Author	Setting	Significance	Tool
Makanyeza et al. (2017)	Banking Sector	Sig,(Positive)	SEM
Kiran and Diljit (2017)	Web-Based Library Services	Not Supported	SEM
Morgan and Govender (2017)	Cellular Sector	Not Supported	SEM
Lai (2015)	Restaurant Industry	Sig,(Positive)	SEM
Izogo and Ogba (2015)	Automobile	Sig,(Positive)	RA
Roy, Butaney, et al. (2014)	Cellular Sector	Sig,(Positive)	SEM
Alnsour et al. (2014)	Cellular Sector	Sig,(Positive)	RA
Razavi et al. (2012)	Software Industry	Sig,(Positive)	SEM
Khurshid (2013)	Cellular Sector	Sig,(Positive)	RA
Anjum et al. (2013)	Cellular Sector	Sig,(Positive)	RA
Lee (2013)	Cellular Sector	Sig,(Positive)	RA
Amin, Ahmad, and Hui (2012)	Cellular Sector	Sig,(Positive)	RA
Boohene and Agyapong (2011)	Cellular Sector	Sig,(Positive)	RA
Lee (2010)	Cellular Sector	Sig,(Positive)	SEM
Lai et al. (2009)	Cellular Sector	Not Supported	RA

Source: Compiled by Author

Note: RA= Regression Analysis

However, few authors found the insignificant relationship between perceived service quality and customer loyalty (Kiran & Diljit, 2017; Lai et al., 2009; Morgan & Govender, 2017).

The inconsistency in the operationalization of perceived service quality (SERVQUAL model) and mixed results provide an opportunity to study further the impact of perceived service quality on customer loyalty in the cellular sector of Pakistan. Hence it is hypothesized that

H1: Perceived service quality is positively related to customer loyalty.

2.4.2 Perceived Value and Customer Loyalty

Researchers recognize the significance of perceived value and customer loyalty as essential features for the success of a firm in enhancing customer relationships and reaching a viable competitive performance (Zeithaml, Berry, & Parasuraman, 1996). There is enough evidence that value judgments have an effect on customer loyalty, with significant results (Chen & Tsai, 2008; Cronin, Brady, & Hult, 2000; Liu, Zhao, Chau, & Tang, 2015). Offering value to customers means developing loyal customers capable of increasing the number of purchases, amount of purchase and decreasing switching actions (Rust, Lemon, & Zeithaml, 2004; Tu, Li, & Chih, 2011). Customer loyalty towards repeat purchase behaviours relies on the extent of value presented by each rival and on the gratification gained from each of them (Callarisa Fiol, Bigne Alcaniz, Moliner Tena, & García, 2009; Kim, Holland, & Han, 2013).

Previous researchers have attempted to expose the well-known determinants of customer loyalty and perceived value is one of them. Perceived value is revealed to be

a credible predictor of customer loyalty (Chen & Tsai, 2008; Ishaq, 2012; Liu et al., 2015; Petrick, 2004; Rasheed & Abadi, 2014). It is a vital factor in explaining customer loyalty behaviour (Eskildsen & Kristensen, 2008; Karjaluoto et al., 2012). Thus, it can be inferred that customer loyalty can be achieved by offering great value to customers (Fathollahzadeh, Hashemi, & Kahreh, 2011).

The significance of customer loyalty in realizing business objectives and its influence on the performance of a business is extensively recognized (Anderson, Fornell, & Lehmann, 1994). Customer loyalty is a result of customers' perceived value, and it serves as a central pointer to a company's performance history (Lam, Shankar, Erramilli, & Murthy, 2004). It also plays a role in the growth of a viable competitive advantage (Ruyter, Wetzels, & Bloemer, 1998).

The totality of a customer's loyalty is the value the customer anticipates compared to the value he or she really received (Gounaris, Tzempelikos, & Chatzipanagiotou, 2007). Perceived value adds to the loyalty gained in business by decreasing a person's desire to search for substitute service providers. In the event of low perceived value, customers will be more willing to switch to rival businesses to raise the perceived value, thereby adding to weakening the loyalty.

In some cases, happy customers are not likely to keep patronage with a business if they have the impression that they are not receiving the utmost value for money. As a replacement, they will search for other sellers in a continued attempt to attain greater value (Anderson & Srinivasan, 2003). The connection between customer loyalty and perceived value seems stronger when customers have the impression that their present

seller offers greater total value than that delivered by competitors (Chang, Wang, & Yang, 2009).

Different authors define perceived value in different ways (Woodruff, 1997). Zeithaml (1988) defined perceived value as the customer's overall evaluation of a market offering, based on their perceptions of what they receive and what they give. In other words, it is the difference between perceived benefits and costs (Lee, 2010; McDougall & Levesque, 2000). It is also defined a ratio between what the customer gets and what the customer gives (Karjaluoto et al., 2012). Zeithaml (1988) explored the customer's perception of value via an exploratory, quantitative study. She describes value in the following manner: (1) value is the low price; (2) value is whatever I want in a product; (3) value is the quality I get for the price I pay; and (4) value is what I get for what I give. She then comprehends this in a single definition: "perceived value is the consumer's overall assessment of the utility of product based on perceptions of what is received and what is given" (Lai, 2004; Lee, 2013).

Meanwhile, Bolton and Drew (1991) draw the definition of the perceived value of service from the definition given by Zeithaml (1988) for products. Hence, the perceived value can be explained as a cognitive trade-off between perceptions of quality and sacrifice. Quality has been identified as the "gets" feature, whereas sacrifice has been identified as the "gives" (Lee, 2013).

Previous authors have operationalized perceived value as both unidimensional and multidimensional variables. The unidimensional approach is based on the price perception or the trade-off between perceived quality and sacrifice (Chi & Kilduff,

2011; Chuah, Marimuthu, & Ramayah, 2014; Dodds & Monroe, 1985). On the other hand, the outcome of a trade-off that is found in some get components and gives components is measured using multidimensional approach (Sweeney & Soutar, 2001). There are many recent studies in cellular (Liu et al., 2015; Morgan & Govender, 2017) and non-cellular service settings (P.-T. Chen & Hu, 2010; Iniesta-Bonillo et al., 2016) which studied perceived value as a unidimensional concept. So based upon recent literature this study also used one-dimensional approach to study perceived value and its impact on customer loyalty.

2.4.2.1 Studies on Perceived Value and Customer Loyalty

Different authors studied the relationship between perceived value and customer loyalty using diverse operationalizations. Lee (2010) and Liu et al. (2015) used unidimensional approach to explore the relationship of perceived value with customer loyalty in cellular sector. Likewise, Howat and Assaker (2013), Ishaq (2012), Wang (2010) and Rasheed and Abadi (2014) used unidimensional approach to study the relationship of perceived value with customer loyalty in different settings.

Others used a multidimensional approach to study perceived value. For example; Floh, Zauner, Koller, and Rusch (2014) studied perceived value with the help of economic value, social value, emotional value and functional value in cellular sector and financial service sector. Similarly, Karjaluoto et al. (2012) studied perceived value in cellular sector via four dimensions: functional, emotional, social and monetary value and found significant positive results. Additionally, some authors used specific dimensions to explore the same relationship like; Kim et al. (2013) used economic and overall value to study perceived value in a tourism setting in the USA. Subsequently Chen and Hu

(2010) studied perceived value via symbolic value and functional value in coffee outlets to link perceived value with customer loyalty.

Apart from the diversification in selecting operationalization of perceived value, there exist inconsistencies in relationship significance of perceived value and customer loyalty. For example, Liu, Zhao, Chau, and Tang (2015), Rasheed and Abadi (2014), Liu et al. (2015) and Munhurrin, Seebaluck, and Naidoo (2015) found the significant

Table 2. 3

Summary of Past Studies on Perceived Value and Customer Loyalty

Author	Setting	Significance	Tool
Kiran and Diljit (2017)	Web-Based Library Services	Not Supported	SEM
Morgan and Govender (2017)	Cellular Sector	Not Supported	SEM
Usman (2017)	Hospital Industry	Not Supported	SEM
Lai (2015)	Restaurant Industry	Not Supported	SEM
Liu et al. (2015)	Cellular Sector	Sig,(Positive)	SEM
Floh et al. (2014)	Cellular and Financial Services	Functional, Social, Economic and Emotional Value: Sig,(Positive)	SEM
Rasheed and Abadi (2014)	Banking, Insurance and Cellular Services	Sig,(Positive)	RA
Kassim et al. (2014)	Cellular Sector	Not Supported	SEM
Howat and Assaker (2013)	Outdoor Aquatic Centres	Not Supported	SEM
Kim et al. (2013)	Tourism Industry	Sig,(Positive)	SEM
Karjaluoto et al. (2012)	Tourism Industry	Sig,(Positive)	RA
Ishaq (2012)	Cellular Sector	Sig,(Positive)	RA
Lee (2010)	Cellular Sector	Sig,(Positive)	SEM

Source: Compiled by Author

Note: RA= Regression Analysis

positive impact of perceived value on customer loyalty.

While a handful of recent studies revealed that perceived value and customer loyalty have an insignificant relationship. A study conducted by Morgan and Govender (2017) in cellular service setting shows that perceived value has an insignificant effect on customer loyalty in cellular sector. This insignificant relationship is also evident in

other studies conducted by in Kiran and Diljit (2017), Usman (2017), Lai (2015) and Kassim, Igau, Harun, and Tahajuddin (2014) in different settings including cellular sector.

Furthermore, Jumaev and Hanaysha (2012) found a negative correlation between perceived value and customer loyalty in the retail banking sector of Malaysia. Additionally, Wang (2010) analysed two models for the same setting and found mixed results for perceived value-customer loyalty relationship in haircut service. Floh et al. (2014) also found mixed results for the relationship of perceived value and customer loyalty in cellular sector. They study the impact of perceived value on three different class groups: rationalist, value maximizers, and functionalists. The results revealed that economic, social, functional and emotional value are positive and significant for rationalist and value maximizes, while for functionalist: economic value and social value failed to generate significant results in the cellular sector.

The diversity in the operationalization of perceived value and mixed results pave the road for further examination of the impact of perceived value on customer loyalty in the cellular sector of Pakistan. Hence it is hypothesized that

H₂: Perceived value is positively related to customer loyalty.

2.4.3 Sales Promotion and Customer Loyalty

A sales promotion is a marketing activity which tries to stimulate the customers to generate a behaviour (Blattberg & Neslin, 1990). It encourages customers to buy the offered products or services. In other words, a sales promotion gives additional benefit to customers for purchasing an offered product or service and this offered benefit is

different from advertisement. It also helps consumers to choose among the competing brands (Alvarez & Casielles, 2005). The objective of a sales promotion is to appeal new customers, maintain existing customers who are planning switching brands and provide incentives to customers who are about to use competing products (Park, Choi, & Moon, 2013).

Sales promotion is a set of stimuli that are offered sporadically, and it reinforces consumers' actions to promote the purchasing of a certain product. It is intended to have a positive impact on behaviour intentions (Alvarez & Casielles, 2005; De Run & Jee, 2009).

According to Churchill and Peter (1998), sales promotion is developed and initiated to generate rapid outcomes that will not only translated into the generation of sales but also helps to inculcate loyalty in customers in the long run. Many authors in the same stream claim that sales promotion technique is a smart way to create loyalty because sales promotion does not only grabs the attention of the customers but also offers them some benefits to buying a particular product or service (Omotayo, 2011) and repeat purchases in future (Tung, Kuo, & Kuo, 2011). Moreover, it also creates customer's loyalty by gaining the competitive advantage in the market. Additionally, after receiving sales promotion, consumers repurchase and give a recommendation to others about that seller (Tung et al., 2011). Likewise, another author claims that if a customer bought a product due to attractive incentives offered by sales promotion and became satisfied, the customer is more likely to rebuy the product over and again in future (Adjei & Denanyoh, 2014). This argument is particularly true for those who have not used that product previously (Peattie & Peattie, 1995).

The boundaries defining sales promotions are neither clearly drawn nor used consistently, but a relatively workable definition of sales promotions is “marketing activities which are usually designed for a specific period, place or customer group, which encourage a direct response from consumers or marketing intermediaries, through the offer of additional benefits” (Peattie & Peattie, 1995). Another definition of sales promotion is “a direct inducement that offers an extra value or incentive for the product to the sales force, distributors, or the final consumer with the primary objective of creating an immediate sale” (Belch & Belch, 2003). The multiple definitions of sales promotion have one thing in common: they all include a short-term and tangible alteration of stock, to achieve the final objective of influencing the behaviour of retailers and customers. (Laroche, Pons, Zgolli, Cervellon, & Kim, 2003). Following Kotler (2012) a key ingredient in a marketing campaign consists of a collection of incentive tools, mostly short term, designed to stimulate quicker or greater purchase of particular products or services by consumers or the trader.

Sales promotions could be in the form of monetary and non-monetary ones (Omotayo, 2011). These types provide both utilitarian and hedonic benefits to the consumers. Utilitarian benefits consist of quality, convenience in shopping, saving in time efforts and cost (Luk & Yip, 2008). Hedonic benefits, on the other hand, includes value expression, exploration, entertainment, intrinsic stimulation and self-esteem (Chandon, Wansink, & Laurent, 2000). According to Luk and Yip (2008), monetary promotions are incentive-based and transactional in nature and provide immediate rewards and utilitarian benefits to the customers. However, non-monetary promotions provide hedonic benefits but weaker utilitarian benefits (Kwok & Uncles, 2005; Luk & Yip, 2008; Vecchio, Henard, & Freling, 2006).

Bagozzi et al. (1998) suggested that sales promotion plays an important role in informing the customers regarding the accessibility of product or services, encourage them to revisit the seller and to increase customer loyalty. Opposite to this, Dubey (2014) has mentioned that sales promotion targeting consumers fades loyalty. Consumers simply buy whichever brand is on sale during a particular week and switch to a competing brand when it goes on sale. Gedenk and Neslin (2000) further argued that sales promotion can lead to a significant decrease in loyalty. These diverse views about the role of sales promotion in generating customer loyalty, calls for further examination of sales promotion in the cellular sector of Pakistan.

2.4.3.1 Studies on Sales Promotion and Customer Loyalty

An extensive review of the literature revealed that sales promotion has a significant positive impact on customer loyalty like Khurshid (2013) conducted a study to find the direct impact of sales promotion on customer loyalty in the cellular sector of Pakistan and found a significant positive result.

Likewise, Yeboah-Asiamah, Quaye, and Nimako (2016) and Adjei and Denanyoh (2014) studied the same relationship in cellular sectors and found similar results. Additionally, other authors studied the same relationship in other sectors: Sundari (2015) in the tourism industry and Dutsenwai, Abdullah, Jamak, and Noor (2015) for consumers of petrol stations found similar results. These supportive results highlight the importance of sales promotions in generating customer loyalty. Interestingly, further examination of sales promotion- customer loyalty linkage reveals some inconsistent findings as Hossain and Suchy (2013) empirically tested sales promotion as a determinant of customer loyalty in the cellular sector of Bangladesh and found

insignificant results. Similarly, few authors in other settings found similar results as Dubey (2014) in Indian cosmetic industry and Gedenk and Neslin (2000) in German and American retail setting discovered that sales promotion fails to generate customer loyalty. These mixed results on this relationship call for further analysis and examination in the cellular sector of Pakistan. Hence it is hypothesized that

H₃: Sales promotion is positively related to customer loyalty.

Table 2. 4

Summary of Past Studies on Sales Promotions and Customer Loyalty

Author	Setting	Significance	Tool
Asiamah et al. (2016)	Cellular Sector	Sig,(Positive)	RA
Santini, Vieira, Sampaio, and Perin (2016)	Meta-analysis	Not Supported	Descriptive Analysis
Mendez, Bendixen, Abratt, Yurova, and O'Leary (2015)	Grocery Store	Sig,(Positive)	RA
Sundari (2015)	Tourism Industry	Sig,(Positive)	SEM
Putra (2015)	Departmental Stores	Sig,(Positive)	RA
Adjei and Denanyoh (2014)	Cellular Sector	Sig,(Positive)	Correlation Analysis
Dubey (2014)	Cosmetics Industry	Not Supported	Pareto Analysis
Saeed, Nisar, Lodhi, Ahmad, and Arshad (2013)	Cellular Sector	Sig,(Positive)	RA
Khurshid (2013)	Cellular Sector	Sig,(Positive)	RA
Hossain and Suchy (2013)	Cellular Sector	Not Supported	RA
Tung et al. (2011)	Departmental Stores	Sig,(Positive)	SEM
Omotayo (2011)	Cellular Sector	Sig,(Positive)	Correlation Analysis
Gedenk and Neslin (2000)	Retail Industry	Not Supported	Logistic Regression

Source: Compiled by Author

Note: RA= Regression Analysis

2.4.4 Perceived Corporate Social Responsibility and Customer Loyalty

Numerous studies have suggested that CSR activities can have a positive affect on customer's attitude toward the organization and its offerings (Bhattacharya & Sen, 2003; Folkes & Kamins, 1999; Lichtenstein, Drumwright, & Braig, 2004). CSR found

to generate direct or indirect customers responses (Berens, Riel, & Bruggen, 2005; Berens, Van Riel, & Van Rekom, 2007; Mandhachitara & Poolthong, 2011). Additionally, CSR has gained the attention of researchers from different disciplines including marketing, management, and organizational behaviour for over twenty years (Sen & Bhattacharya, 2001).

Regardless of the extensive research, CSR as a concept remains ill-defined (Wood, 2010). A variety of views and definitions exist in the past studies. Mostly, CSR has been considered as a complex process and found to have flexibility in its application by any company (Galbreath & Shum, 2012; Wood, 2010). A common point of view about CSR is that a firm should take responsibility toward its society beyond profit maximization (Galbreath & Shum, 2012; Matten & Moon, 2008).

CSR can be defined as the actions to encourage and promote social well-being beyond the motives defined by law (Williams & Siegel, 2001). This view of CSR explains CSR as a voluntary effort beyond a firm's legal and contractual obligations (Williams & Siegel, 2001).

Corporate social responsibility is the participation of organizations or business entities for the wellbeing of society at large beyond profitability (Pomering & Johnson, 2009). For this purpose, the organizations contribute to improving the quality of life for its employees and their families and local community (Su et al., 2014). According to Carroll (1979, p. 500), CSR should fulfil "economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time". Organizations fulfil this responsibility in different ways as introducing community outreach programs,

doing charities through donations, reducing environmental impact and efforts to improve employee diversity (Albinger & Freeman, 2000).

A group of researchers has claimed that customer perception about CSR impacts the customer's evaluation and purchase intention positively (Lee et al., 2012; Sen & Bhattacharya, 2001; Tian, Wang, & Yang, 2011). Research indicates that consumer perception of CSR is a significant predictor of intention to purchase, attitudes, satisfaction and loyalty (Öberseder, Schlegelmilch, & Murphy, 2013; Sindhu & Arif, 2017). Customers judge a service provider and its offerings while keeping in mind the perceptions of CSR, whereby negative CSR perceptions are more powerful and have a more lasting impact on customers than the positive one (Öberseder et al., 2013). However, positive perception improves customer's judgement about the seller and the services it offers (Sen & Bhattacharya, 2001; Su et al., 2014).

The perceptions about socially responsible firms also lead to generate loyalty in the customers (Irshad et al., 2017; Sindhu & Arif, 2017). Additionally, research revealed that customers are likely to buy more services or products from the socially responsible firms (Maignan, Ferrell, & Hult, 1999; Su et al., 2014). Accordingly, customers value the participation of firms in philanthropy programs, sponsorship of cultural events, or support of social events, among other initiatives. As a result, these actions lead to develop or generate greater customer loyalty (Kodua & Mensah, 2017; Martínez, Pérez, & Bosque, 2014). These arguments provide an opportunity to study the impact of CSR perception on customer loyalty in the cellular sector of Pakistan.

2.4.4.1 Studies on Perceived CSR and Customer Loyalty

The extant literature claims that consumer perception of socially responsible firms leads toward the enhancement of customer loyalty. For example, Onlaor and Rotchanakitumnuai (2010) have studied the consumer perception of CSR activities performed by cellular service providers in Thailand on customer loyalty and found a significant positive relationship. Similarly, Su et al. (2014) have tested perceived CSR as direct determinant of customer loyalty in the hotel industry of China and found significant positive results. Additionally other studies by Sindhu and Arif (2017) Kodua and Mensah (2017) in cellular sector, Irshad et al. (2017) for consumers' perception of CSR about private and government sector, Lee, Chang, and Lee (2017) in insurance industry and Barcelos et al. (2015) in banking sector found similar results.

However, there are few studies which lean toward the insignificant relationship between perceived CSR and customer loyalty as Chang and Yeh (2017) in the transportation industry, Mandhachitara and Poolthong (2011) and Barcelos et al. (2015) in banking sector found insignificant results. These inconsistent results provide room for further investigation of this relationship.

Additionally most of the studies addressed the role of corporate social responsibility in non-cellular service setting (Barcelos et al., 2015; Chang & Yeh, 2017; Chung, Yu, et al., 2015; Lee et al., 2017; Mandhachitara & Poolthong, 2011; Su et al., 2014). On the other hand, there are few studies which addressed the impact of CSR on customer loyalty in cellular service sector (Kodua & Mensah, 2017; Sindhu & Arif, 2017). Existing literature is scarce on studying this relationship in the cellular sector which

further stressed to examine this relationship in the cellular sector of Pakistan. Hence it is hypothesized that

H4: Perceived corporate social responsibility is positively related to customer loyalty.

Table 2. 5

Summary of Past Studies on Perceived CSR and Customer Loyalty

Author	Setting	Significance	Tools
Chang and Yeh (2017)	Bus Service	Not Supported	SEM
Sindhu and Arif (2017)	Cellular Sector	Sig,(Positive)	SEM
Irshad et al. (2017)	Private and Government Sector	Sig, (Positive)	RA
Kodua and Mensah (2017)	Cellular Sector	All dimensions except legal responsibility are sig, (Positive)	SEM
Chung, Yu, Choi, and Shin (2015)	Consumer Goods	Sig, (Positive)	SEM
Barcelos et al. (2015)	Banking Sector	Not supported	SEM
Su et al. (2014)	Hotel Industry	Sig, (Positive)	SEM
Swimberghe and Wooldridge (2014)	Service Firms	Sig, (Positive)	SEM
Martínez and Bosque (2013)	Hotel Industry	Sig, (Positive)	SEM
Choi and La (2013)	Service Firms	Sig, (Positive)	SEM
Mandhachitara and Poolthong (2011)	Banking Sector	Not supported	SEM
Onlaor and Rotchanakitumnuai (2010)	Cellular Sector	Sig, (Positive)	RA

Source: Compiled by Author

Note: RA= Regression Analysis

2.4.5 Customer Satisfaction and Customer Loyalty

Marketing literature is mature with the evidence to conclude that customer satisfaction is strongly related to Customer loyalty (Dick & Basu, 1994). Numerous studies have revealed the positive effects of customer satisfaction on customer loyalty (Bloemer, Ruyter, & Wetzels, 1999; Edward et al., 2010; Morgan & Govender, 2017; Oliver, 1999; Ortega, Manzano, Mafe, & Blas, 2017; Pumim et al., 2017). Satisfied customers tend to have higher usage levels of a service than those who are not satisfied (Bolton &

Lemon, 1999). They are more likely to possess a stronger repurchase intention to recommend the product to their acquaintances and exhibit loyalty (Eggert & Ulaga, 2002; Zeithaml et al., 1996).

Moreover, Customer satisfaction with a company's products or services is the key to customer retention, company's success, and long-term competitiveness (Hyun, 2010; Kaur & Soch, 2012; Thurau & Klee, 1997). High customer satisfaction indicates increased loyalty, lower costs of future transactions, lower costs of attracting new customers, and an enhanced reputation for the seller (Anderson et al., 1994; Edward et al., 2010; Fornell, 1992). It is widely agreed that customer satisfaction leads towards customer retention (Kaur & Soch, 2012), increased loyalty and generate word-of-mouth (Bloemer et al., 1999; Edward et al., 2010; Karjaluoto et al., 2012; Kaur & Soch, 2012; Makanyeza et al., 2017; Martínez & Bosque, 2013; Oliver, 1999). Satisfaction is a consumer's post-purchase evaluation and effective response to the overall product or service experience (Adjei & Denanyoh, 2014; Oliver, 1992).

According to Boohene and Agyapong (2011), Barsky (1995) and Besterfield (1994) customer satisfaction is a complex construct as it has been approached differently. There are at least two different conceptualizations of customer satisfaction (Boulding, Kalra, Staelin, & Zeithaml, 1993; Edward et al., 2010). One is transaction-specific, related to satisfaction with respect to each transaction on the specifically related dimensions; the other is cumulative, an evaluation based on the overall consumption experiences (Deng et al., 2010; Edward et al., 2010; Jones & Suh, 2000).

Transaction specific satisfaction explains satisfaction after each or specific purchase occasion through an assessment made after purchase by comparing expected performance with actual performance, which most of the time is a factor of cost being incurred, quality and price (Churchill & Surprenant, 1982; Parasuraman, Zeithaml, & Berry, 1994; Santouridis & Trivellas, 2010). Among the definitions encapsulating the cumulative type of satisfaction have in fact an overall element such as overall post-purchase evaluation, overall evaluation on achieving customers' expectation and company's performances against other providers, likewise users' personal evaluation of pleasure with service providers which is seen as a cumulative experience. This type of satisfaction has been used in numerous studies, be it cellular or non-cellular industry (Adoyo et al., 2012; Fornell, 1992; Han & Hwang, 2015; Kaur & Soch, 2012; Mokhtar et al., 2011; Muturi et al., 2013).

Moreover, Cumulative type of satisfaction which is laid on an overall evaluation of total purchase and consumption experience with a good or bad service over time does also concur with satisfaction, being viewed as an affective state with positive feelings (Cronin et al., 2000; Dick & Basu, 1994). This state, in actual fact, explains the way customer reacts to the state of fulfilment and customer judgment of the fulfilled state besides being an important determinant of customer loyalty (Oliver, 2014). As such, it is worth to note the broader definition of satisfaction as mentioned in the work of Oliver (2014) as :“consumer’s fulfilment response, a judgment that product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under or over fulfilment.”.

The cumulative type of satisfaction, being operationalized in past research, laid on economic-psychological fundamentals, has been shown to be more important as it emblems historical evidences, current state of affair and also the future performances (Anderson et al., 1994; Johnson, Gustafsson, Andreassen, Lervik, & Cha, 2001), therefore this study leverages on cumulative type of satisfaction. This perspective is undertaken as several past studies have adopted cumulative type of satisfaction in their operational definition, especially in service industries such as cellular sector where services are continuously utilized (Aydin & Özer, 2005; Kim et al., 2004; Kuusik & Varblane, 2009; Mokhtar et al., 2011; Muturi et al., 2013; Roy, Butaney, et al., 2014).

2.4.5.1 Studies on Customer Satisfaction and Customer Loyalty

Customer satisfaction has been found to play a central role in loyalty's studies (George & Upadhyaya, 2015; Kiran & Diljit, 2017). Despite this fact, the predicting power of customer satisfaction for loyalty generation, had, however, revealed inconsistencies. On one end, customer satisfaction found to be a significant predictor of customer loyalty in cellular settings (Ahmad et al., 2015; Bajs, 2015; Cho & Cho, 2017; George & Upadhyaya, 2015; Han & Hwang, 2014; Lee, 2013; Matzler, Strobl, Thurner, & Füller, 2015; Minarti & Segoro, 2014; Morgan & Govender, 2017; Nasir et al., 2014; Oghojafor, Ladipo, Ighomereho, & Odunewu, 2014; Pumim et al., 2017; Roy, Butaney, et al., 2014). Similar results reported in non-cellular studies, for example, Lai (2015) in the restaurant industry, and Makanyeza et al. (2017) in Banking, Bajs (2015) in the tourism industry, Han and Hwang (2014) in the airline industry, found a significant impact of customer satisfaction on customer loyalty.

Whereas on the other end, researchers such as Adeleke and Suraju (2012) found that satisfaction could not predict loyalty in Nigeria, similar to the study done in Kenya by Muturi et al. (2013) and Edward et al. (2010) in India which reveals insignificant results for customer satisfaction-loyalty relationship. Another study in Ghana's cellular sector found a significant but negative result (Boohene & Agyapong, 2011).

There is also methodological uniqueness in satisfaction and loyalty studies, one of which experienced by researchers, Izogo and Ogba (2015) whose effort to examine satisfaction and loyalty relationship in automobile industry went futile as satisfaction and loyalty loaded on a single factor, post factor analysis. The inconsistencies were further brought to light the presence of diverse results, even though similar analysis method was operationalized at recently concluded studies. In one instance studies undertaken by researchers who employed regression method with seven points Likert scale as a measurement tool, found a positive and significant relationship between satisfaction and loyalty (Ahmad et al., 2015; George & Upadhyaya, 2015; Minarti & Segoro, 2014). Meanwhile, Adoyo et al. (2012), Muturi et al. (2013) and Edward et al. (2010) when employed the same regression and seven points Likert scale, found that satisfaction and loyalty relationship are not bearing significant outcomes. As such, the equivocal standing of satisfaction does obviously warrant further confirmation. Hence it is hypothesized that

H₅: Customer satisfaction is positively related to customer loyalty.

Table 2. 6

Summary of Past Studies on Customer Satisfaction and Customer Loyalty

Author	Setting	Significance	Tool
Makanyeza et al. (2017)	Banking Sector	Sig,(Positive)	SEM
Cho and Cho (2017)	Cellular Sector	Sig,(Positive)	SEM
Kiran and Diljit (2017)	Web-Based Library Services	Sig,(Positive)	SEM
Ortega et al. (2017)	Cellular Sector	Sig,(Positive)	SEM
Sindhu and Arif (2017)	Cellular Sector	Sig,(Positive)	SEM
Lai (2015)	Restaurant Industry	Sig,(Positive)	SEM
George and Upadhyaya (2015)	Cellular Sector	Sig,(Positive)	RA
Ahmad et al. (2015)	Cellular Sector	Sig,(Positive)	RA
Barcelos et al. (2015)	Banking Sector	Sig,(Positive)	SEM
Matzler et al. (2015)	ICT Industry	Sig,(Positive)	SEM
Bajs (2015)	Tourism Industry	Sig,(Positive)	SEM
Oghojafor et al. (2014)	Cellular Sector	Sig,(Positive)	RA
Minarti and Segoro (2014)	Cellular Sector	Sig,(Positive)	RA
Nasir et al. (2014)	Cellular Sector	Sig,(Positive)	SEM
Roy, Butaney, et al. (2014)	Cellular Sector	Sig,(Positive)	SEM
Han and Hwang (2014)	Airline Industry	Sig,(Positive)	SEM
Lee (2013)	Cellular Sector	Sig,(Positive)	RA
Muturi et al. (2013)	Cellular Sector	Not Supported	RA
Raza and Rehman (2012)	Cellular Sector	Sig,(Positive)	SEM
Adeleke and Suraju (2012)	Cellular Sector	Not Supported	Descriptive Analysis
Haghighi, Dorosti, Rahn timer, and Hoseinpour (2012)	Restaurant Industry	Sig,(Positive)	SEM
Adoyo et al. (2012)	Pharmaceuticals	Not Supported	RA
Mokhtar et al. (2011)	Cellular Sector	Sig,(Positive)	RA
Lee (2010)	Cellular Sector	Sig,(Positive)	SEM
Edward et al. (2010)	Cellular Sector	Not Supported	RA
Deng et al. (2010)	Cellular Sector	Sig,(Positive)	SEM
Hyun (2010)	Restaurant Industry	Sig,(Positive)	SEM

Source: Compiled by Author

Note: RA= Regression Analysis

2.4.6 Customer Trust and Customer Loyalty

Customer trust has been shown to be highly correlated with customer loyalty because whosoever trust the organization will remain loyal to it (Garbarino & Johnson, 1999; Sindhu & Arif, 2017). As such, one cannot deny the importance of trust towards predicting loyalty besides being one of the basic ingredients of human interactions as

prescribed by Gundlach and Murphy (1993, p. 41) that, *"the variable most universally accepted as a basis of any human interaction or exchange is trust"* this notion has been agreed by numerous literature, that trust is a vital element to maintaining relationship and loyalty (Akbar & Parvez, 2009; Aydin & Özer, 2005; Liu, Guo, & Lee, 2011; Zaman, Bibi, Arshad, & Shahzad, 2012).

In fact, it is not an exaggeration to say that trust act as a catalyst to customer loyalty. It is because when trust is established with an individual, the fundamentals of interpersonal loyalty take place, which in return produce a greater impact on consumer behaviour towards the seller (Iacobucci & Ostrom, 1996; Macintosh & Lockshin, 1997).

Marketing literature recommends that trust leads directly to loyalty based on the fact that trust produces exchange associations that are highly valued (Afsar, Rehman, Qureshi, & Shahjehan, 2010; Pumim et al., 2017). Liu et al. (2011, p. 72) define trust as "One party believing that the other party will fulfil his or her needs." Many researchers have adopted a definition of trust advocated by Morgan and Hunt (1994); "trust works at preserving relationship investment by cooperating with exchange partner, resist attractive short-term alternatives for the expected long-term benefits of staying with existing partners." (Morgan & Hunt, 1994, p. 22).

Researchers revealed that customer loyalty is about maintaining the relationship and trust does have an influence on the strong relationship between customers and service providers. When deciding to end the relationship, customers will appraise all the underpinning costs incurred to switch to a new relationship. Satisfied customers will

have the intention to switch to another service seller if the trust is low and may stay if the trust is high (Deng et al., 2010).

There are also some strings of researchers who viewed existence of trust being showed as intention to act or conative side of loyalty such as Aydin and Özer (2005, p. 912) who have operationalized and define trust as “when one party trusts another it is likely to develop some form of positive buying intention towards the other party” followed by Mayer, Davis, and Schoorman (1995, p. 712), “willingness of a party to be vulnerable to the actions of another party based on expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.” This study proceeds by positioning trust as a conative component because one needs a positive attitude to have trust. Furthermore, the researcher’s proposition that customers’ disposition of trust is reflected after cognitive and affective experiences are also in line with Morgan and Hunt (1994, p. 23) who stressed that “willingness to act is implicit in the conceptualization of trust” and further echo that service provider is not considered trustworthy if a customer is not willing to act or intend to continue patronizing. Also, the absence of attitude factor would surely hinder loyalty initiatives, and perhaps, this is glaringly seen in the stochastic phenomenon (Odin et al., 2001) which resulted in spurious loyalty (Day, 1969; Dick & Basu, 1994), all transpired in the absence of trust. As such, this study posits that existence of the trust is crucial for loyalty and could probably minimize the stochastic and spurious type of loyalty eventually. Therefore, it is suggested that customers trust will directly generate loyalty in customers of the cellular sector of Pakistan.

2.4.6.1 Studies on Customer Trust and Customer Loyalty

Trust has been predominantly a significant predictor of customer loyalty in several studies (Ahmad et al., 2015; Barcelos et al., 2015; Choi & La, 2013; Islam, 2010; Karjaluoto et al., 2012; Liu et al., 2011; Minarti & Segoro, 2014; Park et al., 2017; Roy, Butaney, et al., 2014). This could probably be because for any transaction to be initiated, trust plays a central role, given the nature of being the most universally accepted basis for human interaction (Gundlach & Murphy, 1993).

Trust's position in cellular setting can never be underrated. This can be seen in various studies whereby trust has stamped its mark as the significant predictor of loyalty (Roy, Butaney, et al., 2014). For example, Sindhu and Arif (2017) found that trust is a significant predictor of loyalty in the cellular industry. Likewise, another study done by Usman (2017) among hospital patients has, in fact, produced significant outcome between trust and loyalty. Most of the studies on trust and loyalty relationship could imply that trust is, in fact, a strong predictor of loyalty in the cellular industry, and this goes back to the propensity of trust, being the basic essence in human interactions (Amin et al., 2012; Karjaluoto et al., 2012; Khokhar et al., 2011; Nasir et al., 2014; Raza & Rehman, 2012).

There are only a few studies by Pumim et al. (2017), Minarti and Segoro (2014) in the cellular sector and Haghighi et al. (2012) in the restaurant industry which show the insignificant relationship of trust with customer loyalty.

Table 2. 7

Summary of Past Studies on Customer Trust and Customer Loyalty

Author	Setting	Significance	Tool
Sindhu and Arif (2017)	Cellular Sector	Sig,(Positive)	SEM
Park et al. (2017)	Consumer Perception about CSR	Sig,(Positive)	SEM
Purnim et al. (2017)	Cellular Sector	Not Supported	SEM
Usman (2017)	Hospital Industry	Sig,(Positive)	SEM
Reuver, Nikou, and Bouwman (2015)	Smart Phones	Sig,(Positive)	SEM
Ahmad et al. (2015)	Cellular Sector	Sig,(Positive)	RA
Barcelos et al. (2015)	Banking Sector	Sig,(Positive)	SEM
Oghojafor et al. (2014)	Cellular Sector	Sig,(Positive)	RA
Rasheed and Abadi (2014)	Banking, Insurance and Cellular Sectors	Sig,(Positive)	Descriptive Analysis
Minarti and Segoro (2014)	Cellular Sector	Not supported	RA
Nasir et al. (2014)	Cellular Sector	Sig,(Positive)	SEM
Roy, Butaney, et al. (2014)	Cellular Sector	Sig,(Positive)	SEM
Choi and La (2013)	Service Sector	Sig,(Positive)	SEM
Anjum et al. (2013)	Cellular Sector	Sig,(Positive)	RA
Karjaluo et al. (2012)	Cellular Sector	Sig,(Positive)	RA
Raza and Rehman (2012)	Cellular Sector	Sig,(Positive)	SEM
Adoyo et al. (2012)	Pharmaceutical Industry	Not Supported	RA
Amin et al. (2012)	Cellular Sector	Sig,(Positive)	RA
Haghighi et al. (2012)	Restaurant Industry	Not supported	SEM
Khokhar et al. (2011)	Cellular Sector	Sig,(Positive)	RA
Liu et al. (2011)	Cellular Sector	Sig,(Positive)	SEM
Islam (2010)	Cellular Sector	Sig,(Positive)	RA
Deng et al. (2010)	Cellular Sector	Sig,(Positive)	SEM
Hyun (2010)	Restaurant Industry	Sig,(Positive)	SEM
Zhou, Li, and Liu (2010)	Cellular Sector	Sig,(Positive)	SEM

Source: Compiled by Author

Note: RA= Regression Analysis

Studies on trust in the non-cellular industries have revealed a similar scenario where trust predict loyalty positively and significantly. For instance, Mafe, Parreno, and Blas (2014) have found that trust is an important antecedent of Facebook fan page loyalty, followed by a study by Sumaedi et al. (2014) in the healthcare industry which resulted in an outcome similar to Mafe et al. (2014). Since customer trust is a key determinant

of customer loyalty, which necessitate to examine its impact on customer loyalty in the cellular sector of Pakistan. Hence it is hypothesized that

H₆: Customer trust is positively related to customer loyalty.

2.5 Direct Determinants of Customer Satisfaction

2.5.1 Perceived Service Quality and Customer Satisfaction

Extant literature shows that perceived service quality has been used as a direct predictor of customer satisfaction frequently. Most of the authors declare that service quality plays a central role in developing customer satisfaction. The relationship between perceived service quality and customer satisfaction has been a subject of interest in research. Most researchers in this field have concluded that perceived service quality is a vital element of customer satisfaction (Han & Hwang, 2015; Hassan, Malik, & Faiz, 2012; Santouridis & Trivellas, 2010). Particularly in the service sector, service quality helps to enhance customer satisfaction (Pumim et al., 2017). Also, several researchers realize that improved service quality correlates with reasonably high customer satisfaction (Cronin et al., 2000; Kim & Lee, 2010). Similarly, service quality has also been revealed to be a powerful predictor of customer satisfaction and customer loyalty (Ganguli & Roy, 2011; Pumim et al., 2017).

Perceived service quality is the customer's opinion of the service provider's effectiveness, and it is considerably related to customer satisfaction (Barcelos et al., 2015). Service quality is additionally regarded as the customer's opinion of the dominance or weakness of a service provider and the services it renders (Tsoukatos & Rand, 2006). Services quality impress customers and they consider the service provided

as competent and better. Service quality increases customers' propensity to rely more on the service, increase the frequency of services, reduce sensitivity to cost and inform friends about how advantageous and valuable the services are (Venetis & Ghauri, 2000).

In recent times, there has been an increased demand for service quality and customer satisfaction equally in business and academic circles. Nasir et al. (2014) indicate that a powerful connection exists between service quality and customer satisfaction in the cellular sector of Pakistan. Other empirical studies in cellular setting also support this notion as Pumim et al. (2017), Olatokun and Ojo (2016) and Raza and Rehman (2012) in cellular sector, Lai (2015) in restaurant industry found similar results.

However, there are few studies which have contradictory findings and shows that service quality does not impact customer satisfaction significantly as Uddin and Akhter (2012) studied the same relationship in the cellular sector of Pakistan and revealed insignificant results. Similarly, Morgan and Govender (2017) and Zhao, Lu, Zhang, and Chau (2012) in cellular sector, Kiran and Diljit (2017) in web-based library services found insignificant results in the cellular setting. These mixed results in cellular sector call for further examination of this relationship, so this study includes perceived service quality as an antecedent of customer satisfaction. Hence it is hypothesized that

H7: Perceived service quality is positively related to customer satisfaction.

2.5.2 Perceived Value and Customer Satisfaction

Researchers have studied the correlation between perceived value and customer satisfaction (Cronin et al., 2000). They discover that high perceived value is linked to

comparatively high customer satisfaction (Cronin et al., 2000; Kuo, Chang, Cheng, & Lai, 2013). The essence of building perceived value is to fulfil target customer's needs, thereby raising customer satisfaction. Therefore, it is argued that the purpose of customer loyalty marketing, which is realized by retaining and cultivating customers, relies on providing customers perceived value and satisfaction (Fathollahzadeh et al., 2011; Morgan & Govender, 2017).

To satisfy the customers, marketing is used as a tool to provide increased value and develop a beneficial relationship with them (Kotler, 2012). If the customers are unhappy or unsatisfactory then all the marketing strategies will go in vain (Tu et al., 2011). Perceived value judgements have a significant impact on customer satisfaction and customer loyalty (Cronin et al., 2000; Hussain, Nasser, & Hussain, 2015; Lee, 2010; Pumim et al., 2017). Ortega et al. (2017) and Morgan and Govender (2017) in cellular sector supported that perceived value is a significant predictor of customer satisfaction.

Additionally, authors in other sectors too researched the impact of perceived value on customer satisfaction and found perceived value to be significant predictor of customer satisfaction as Bajs (2015) in tourism industry, Ryu, Lee, and Gon Kim (2012) in restaurant industry revealed that perceived value help to increased customer satisfaction. These studies highlighted the importance of perceived value as a predictor of customer satisfaction, so this study includes perceived value as an antecedent of customer satisfaction. Hence it is hypothesized that

H₈: Perceived value is positively related to customer satisfaction

2.5.3 Sales Promotion and Customer Satisfaction

Sales promotion results in changing consumer behaviour. It influences consumer purchase decision by increasing their purchases. It also results in developing favourable purchase quantity, attitude, and behavioural intentions. Some studies reveal that sales promotion also help to enhance customer satisfaction (Dutsenwai et al., 2015; Ubeja, 2014). There are many studies on the impact of sales promotion on customer satisfaction. For example, Khan, Hussain, and Yaqoob (2012) have studied sales promotion as a direct determinant of customer satisfaction in the fast food industry of Pakistan and found significant results. Ogbojafor et al. (2014) studied Nigerian cellular service market and found similar results. Another study by Ubeja (2014) in India's shopping mall found the significant positive impact of sales promotion on customer satisfaction via descriptive analysis.

In addition, Pi and Huang (2011) studied the effect of sales promotion on satisfaction in the airline industry of China and found a significant positive relationship. Another study in Malaysian automotive industry found similar results for the impact of advertisement promotional strategies on customer satisfaction (Hilman & Hanaysha, 2015). Since there is a limited number of studies in cellular services setting so this study will enhance existing literature on this relationship in the cellular service sector of Pakistan. Hence it is hypothesized that

H₀: Sales promotion is positively related to customer satisfaction.

2.5.4 Perceived CSR and Customer Satisfaction

Extant literature suggested that perceived CSR helps to enhance customer satisfaction. Moreover, CSR perception effects customer satisfaction positively and generate a positive attitude toward seller (Bhattacharya & Sen, 2003; Carroll, 2004; Chang & Yeh, 2017; Saeidi, Sofian, Saeidi, Saeidi, & Saaeidi, 2015). Previous studies declare that perceived CSR is a direct determinant of customer satisfaction. This notion is supported by the research of Sindhu and Arif (2017) and Islam et al. (2013) in Pakistan's cellular service sector where perceived CSR found to impact customer satisfaction significantly and positively. Similarly, in the cellular service sector of Thailand Onlaor and Rotchanakitumnuai (2010) found the significant positive impact of perceived CSR on customer satisfaction. In sectors other than cellular similar trends can be traced as Martínez and Bosque (2013) and Pérez and Bosque (2015) have studied perceived CSR as a direct predictor of customer satisfaction in the hotel industry of Spain, Barcelos et al. (2015) in the banking sector of Brazil. All of these studies declare that perceived CSR is an important predictor of customer satisfaction. Interestingly Swimberghe and Wooldridge (2014) in the hotel industry of USA found insignificant results for the impact of perceived CSR on customer satisfaction.

There are limited studies on perceived CSR and customer satisfaction in the cellular service sector as compared to other sectors e.g. hotel industry and the mixed findings in the literature on this relationship provide the opportunity to include this relationship in this study to enhance the existing literature. Hence it is hypothesized that

H₁₀: Perceived corporate social responsibility is positively related to customer satisfaction.

2.5.5 Summary of Direct Determinants of Customer Satisfaction

This section presents the summary of direct determinants of customer satisfaction which are given in table 2.8.

Table 2. 8

Summary of Direct Determinants of Customer Satisfaction

Author	Setting	IV	Relationship
Kiran and Diljit (2017)	Web-Based Library Services	PSQ	Not Supported
Pumim et al. (2017)	Cellular Sector	PSQ	Sig,(Positive)
Han and Hyun (2015)	Medical Clinics	PSQ	Sig,(Positive)
Barcelos et al. (2015)	Banking Sector	PSQ	Sig,(Positive)
Nasir et al. (2014)	Cellular Sector	PSQ	Sig,(Positive)
Zhao et al. (2012)	Cellular Sector	PSQ	Not Supported
Uddin and Akhter (2012)	Cellular Sector	PSQ	Not Supported
Hassan et al. (2012)	Cellular Sector	PSQ	Sig,(Positive)
Raza and Rehman (2012)	Cellular Sector	PSQ	Sig,(Positive)
Hafeez and Hasnu (2010)	Cellular Sector	PSQ	Sig,(Positive)
Lee (2010)	Cellular Sector	PSQ	Sig,(Positive)
Deng et al. (2010)	Cellular Sector	PSQ	Sig,(Positive)
Lai et al. (2009)	Cellular Sector	PSQ	Not Supported
Ortega et al. (2017)	Cellular Sector	PV	Sig,(Positive)
Pumim et al. (2017)	Cellular Sector	PV	Sig,(Positive)
Morgan and Govender (2017)	Cellular Sector	PV	Sig,(Positive)
Bajs (2015)	Tourism Industry	PV	Sig,(Positive)
Lai (2015)	Restaurant Industry	PV	Sig,(Positive)
Ishaq, Khan, and Jehanzeb (2013)	Medicine Industry	PV	Not Supported
Kuo et al. (2013)	Travel Agencies	PV	Sig,(Positive)
Edward and Sahadev (2011)	Cellular Sector	PV	Sig,(Positive)
Lee and Tsai (2010)	Cellular Sector	PV	Sig,(Positive)
Wallin Andreassen and Lindestad (1998)	Tourism Industry	PV	Not Supported
Hilman and Hanaysha (2015)	Automotive Industry	SP	Sig,(Positive)
Dutsenwai et al. (2015)	Petrol Stations	SP	Sig,(Positive)
Huang, Chang, Yeh, and Liao (2014)	Restaurant Industry	SP	Sig,(Positive)
Oghojafor et al. (2014)	Cellular Sector	SP	Sig,(Positive)
Ubeja (2014)	Shopping Malls	SP	Sig,(Positive)
Khan et al. (2012)	Food industry	SP	Sig,(Positive)
Sindhu and Arif (2017)	Cellular Sector	PCSR	Sig,(Positive)
Chang and Yeh (2017)	Bus Service	PCSR	Sig,(Positive)

Irshad et al. (2017)	Private and Government Sector	PCSR	Sig,(Positive)
Park et al. (2017)	Retail Industry	PCSR	Sig,(Positive)
Pérez and Bosque (2015)	Banking Sector	PCSR	Sig,(Positive)
Barcelos et al. (2015)	Banking Sector	PCSR	Sig,(Positive)
Halim and Hermawan (2017)	Airline Industry	PCSR	Not Supported
Swimberghe and Wooldridge (2014)	Restaurant Industry	PCSR	Not Supported
Islam et al. (2013)	Cellular Sector	PCSR	Sig,(Positive)

Source: Compiled by Author

Note: PSQ= Perceived Service Quality, PV= Perceived Value, SP= Sales Promotion, PCSR=Perceived Corporate Social Responsibility.

2.6 Direct Determinants of Customer Trust

2.6.1 Perceived Service Quality and Customer Trust

It is very necessary to provide a high quality of services to customers in a highly competitive service environment. Customer's perception of service quality is an overall judgment of a service that contributes to developing trust on the seller (Usman, 2017). Service quality helps the customer to trust the service provider more, to use the services, recommend others the services positively and become less price sensitive for the utility of those services (Raza & Rehman, 2012).

Extant literature revealed that quality of service is a significant predictor of customer trust. Raza and Rehman (2012) have found the significant positive impact of perceived service quality on customer trust in the cellular sector of Pakistan. Similarly, Nasir et al. (2014) and Amin et al. (2012) in cellular sector found similar results. Apart from the cellular sector, Hayat (2017), Barcelos et al. (2015) and Rasheed and Abadi (2014) have similar findings in the banking sector. Therefore, these findings in service sector stressed upon the fact that service quality impacts trust positively so this study includes this relationship.

Hence it is hypothesized that

H₁₁: Perceived service quality is positively related to customer trust.

2.6.2 Perceived Value and Customer Trust

According to Doney and Cannon (1997) trust is the key factor to initiate a relationship, to develop and maintain it over the time. Particularly, for the purchase of services, the exchange process highly rely upon trust on seller considering the intangible nature of services, which increase uncertainty and risk for the customers during purchase and consumption process (Berry, 1995). Perceived value and trust have a direct positive association (Wang, 2014). Recent research shows that perceived value impact perception about the seller and the trust level during exchange process, so customer trust is the key factor which is effected through the perception of value being generated (Karjaluoto et al., 2012).

A study in the cellular service sector of Finland reported that perceived value and trust are linked strongly and positively (Karjaluoto et al., 2012). Other studies by Pumim et al. (2017), Wang (2014) in the cellular sector and Chinomona, Okoumba, and Poee (2013) in electronic industry revealed similar results. However, as Harris and Goode (2004) and Sirdeshmukh, Singh, and Sabol (2002) note, that there is a need for further research to explore the relationship of perceived value and customer trust in the service context. So in the light of literature, this study included perceived value as an antecedent of customer trust. Hence it is hypothesized that

H₁₂: Perceived value is positively related to customer trust.

2.6.3 Sales Promotion and Customer Trust

Promotion strategies are widely used by sellers to attract consumers and engage them in an exchange relationship. There are multiple consequences of sales promotions; customer trust is one of them (Pi & Huang, 2011). Moreover, Selnes (1998) found that if the seller is competent in communicating sales promotion, it will enhance customer trust on the seller.

There are limited studies, which researched the impact of sales promotion on customer trust. Pi and Huang (2011) have studied the effect of sales promotion on customer trust in the airline industry of China and found a significant positive relationship between sales promotion and customer trust. Another study in Malaysian automotive industry found similar results for the impact of advertisement promotional strategies on customer trust (Hilman & Hanaysha, 2015). Since there are limited studies on the relationship of sales promotion and customer trust. There is a need for further examination of this relationship in the cellular sector of Pakistan.

Hence it is hypothesized that

H₁₃: Sales promotion is positively related to customer trust.

2.6.4 Perceived CSR and Customer Trust

Customer trust is influenced by the shared values communicated by the company to the customers and society (Morgan & Hunt, 1994). CSR activities of an organization give an idea about its corporate character, its values and its concerns for society (Brown & Dacin, 1997) and this socially responsible behaviour, and character help to boost trust among customers of the organization (Aaker, 1996). Martínez and Bosque (2013) suggest that by incorporating the socially responsible behaviour and ethical principles

in the strategic decision making of an organization, it could enrich the trust level of stakeholders including customers. This notion is developed on the belief that the service provider is committed to the social concerns beyond their legal and contractual obligations (Swaen & Chumpitaz, 2008). To support this idea, Pivato, Misani, and Tencati (2008, p. 5) also recently proposed that “*the creation of trust is one of the most immediate consequences of a company’s social performance*” or the immediate or most proximate outcome of CSR activities (with attitude, behaviours, and financial performance is more distal CSR outcomes).

Recent literature on service sector including cellular sector for example, Sindhu and Arif (2017) in cellular sector, Martínez and Bosque (2013) in hotel industry, Swimberghe and Wooldridge (2014) in restaurant industry, Choi and La (2013) service failure experience in different service firms, Samuel and Chandra (2014) in cosmetic industry and Barcelos et al. (2015) in banking sector strengthen the argument that perceived CSR has significant positive impact on trust. So, keeping in view the proximity of perceived CSR with customer trust and lack of studies in the cellular sector of Pakistan this study included this relationship. Hence it is hypothesized that

H₁₄: Perceived corporate social responsibility is positively related to customer trust.

2.6.5 Customer Satisfaction and Customer Trust

Apart from being a strong antecedent of customer loyalty, customer satisfaction plays a central role for the generation of customer trust (Ahmad et al., 2015). Past literature suggests that when the consumers are satisfied with the services of the seller, they are more likely to trust that seller (Suki, 2011; Trif, 2013; Wah Yap, Ramayah, &

Nushazelin Wan Shahidan, 2012). According to Lee, Moon, Kim, and Mun (2015), customer satisfaction is a significant positive determinant of customer loyalty in cellular sector. Similarly, Ahmad et al. (2015) found a significant positive relationship between customer satisfaction and customer trust in Pakistani cellular sector. Since customer satisfaction plays a significant and important role in encouraging the cellular consumers to develop trust on the cellular service provider, this study includes this relationship. Hence it is hypothesized that

H₁₄: Customer satisfaction is positively related to customer trust.

2.6.6 Summary of Direct Determinants of Customer Trust

Below Table 2.9 provide a brief summary of determinants of customer trust.

Table 2. 9
Summary of Direct Determinants of Customer Trust

Authors	Setting	IV	Relationship
Usman (2017)	Hospital Industry	PSQ	Sig, (Positive)
Hayat (2017)	Banking Sector	PSQ	Sig,(Positive)
Barcelos et al. (2015)	Banking Sector	PSQ	Sig,(Positive)
Debei, Akroush, and Ashouri (2015)	Online Products and Services	PSQ	Sig,(Positive)
Rasheed and Abadi (2014)	Banking, Insurance, and Cellular Sector	PSQ	Sig,(Positive)
Nasir et al. (2014)	Cellular Sector	PSQ	Sig,(Positive)
Raza and Rehman (2012)	Cellular Sector	PSQ	Sig,(Positive)
Amin et al. (2012)	Cellular Sector	PSQ	Sig,(Positive)
Pumim et al. (2017)	Cellular Sector	PV	Sig,(Positive)
Chung, Oh, Kim, and Park (2015)	Cellular Mobiles	PV	Not Supported
Wang (2014)	Cellular Sector	PV	Sig,(Positive)
Chinomona et al. (2013)	Electronic Gadgets	PV	Sig,(Positive)
Karjaluoto et al. (2012)	Cellular Sector	PV	Sig,(Positive)
Wang and Xu (2008)	Online Shopping Experience	PV	Not Supported
Hilman and Hanaysha (2015)	Automotive industry	SP	Sig,(Positive)
Pi and Huang (2011)	Airline industry	SP	Sig,(Positive)
Sindhu and Arif (2017)	Cellular Sector	PCSR	Sig,(Positive)

Park et al. (2017)	Retail Industry	PCSR	Sig,(Positive)
Halim and Hermawan (2017)	Airline Industry	PCSR	Sig,(Positive)
Barcelos et al. (2015)	Banking Sector	PCSR	Sig,(Positive)
Semuel and Chandra (2014)	Cosmetics Industry	PCSR	Sig,(Positive)
Swimberghe and Wooldridge (2014)	Restaurant Industry	PCSR	Sig,(Positive)
Choi and La (2013)	Service Industry	PCSR	Sig,(Positive)
Martínez and Bosque (2013)	Hotel Industry	PCSR	Sig,(Positive)
Lee et al. (2015)	Cellular Sector	CS	Sig,(Positive)
Trif (2013)	Business to Business	CS	Sig,(Positive)
Wah Yap et al. (2012)	Banking Sector	CS	Sig,(Positive)
Suki (2011)	Mobile Commerce	CS	Sig,(Positive)

Source: Compiled by Author

Note: Customer Satisfaction= CS

2.7 Indirect Determinants of Customer Loyalty

2.7.1 Customer Satisfaction as a Mediating Variable to Customer Loyalty

2.7.1.1 Perceived Service Quality-Customer Satisfaction-Customer Loyalty

Literature has concluded that service quality is a vital element of customer satisfaction (Santouridis & Trivellas, 2010) also, several researchers realize that improved service quality correlates with reasonably high customer satisfaction (Kim, 2010). Similarly, service quality has also been revealed to be a powerful predictor of customer satisfaction and customer loyalty (Ganguli & Roy, 2011).

Empirical studies establish that a higher improved degree of service quality is connected to the greater level of customer satisfaction. Service quality is capable of attracting new customers, keep current customers and pull customers away from rivals whose service quality is regarded as poorer (Deng et al., 2010). Jones, Mothersbaugh, and Beatty (2002) opine that a positive connection exists among service quality as well as recommendation, resistance to better alternatives and repurchase intention. These three features: recommendation, resistance to better alternatives and repurchase intention are behavioural intentions and constitute customer loyalty. So, service quality

has a direct impact on customer satisfaction and indirect impact on customer loyalty. This argument is supported by the study on the cellular service sector, Deng et al. (2010) find that customer satisfaction has a mediating role in the relationship between service quality and customer loyalty in Chinese cellular sector. Similarly, in the cellular sector of Korea and China Lai et al. (2009), Lee (2010) and Lee (2013) reveal that customer satisfaction mediates the relationship between service quality and customer loyalty.

In other sectors, for instance, in the banking sector of Zimbabwe, Makanyeza et al. (2017), in the healthcare sector of Korea, Han and Hwang (2014) revealed that customer satisfaction is a vital mediator between perceived service quality and customer loyalty. The importance of the mediating role of customer satisfaction in cellular telecom calls for further examination of the indirect impact of service quality on customer loyalty via customer satisfaction. Hence it is hypothesized that

H_{15a}: Customer satisfaction mediates the relationship between perceived service quality and customer loyalty.

2.7.1.2 Perceived Value-Customer Satisfaction-Customer Loyalty

Marketing exists to provide increased perceived value to gratify customers and create a lasting and equally beneficial association with customers. If a company's products or services are unsatisfactory to customers, then all the strategies are insufficient (Tu et al., 2011). Perceived value judgments are revealed to have an influence on satisfaction and customer loyalty (Cronin et al., 2000). Literature also claims that perceived value indirectly impacts customer loyalty via customer satisfaction. This notion is supported by the studies in Chinese cellular sector, which reveals that customer satisfaction

mediates the effect of perceived value on customer loyalty (Deng et al., 2010; Lai et al., 2009).

Other research studies in other industries, for instance, El-Adly and Eid (2016) in shopping malls, Turk, Ekinci, and Martin (2015) and Munhurrin et al. (2015) in tourism industry, Roig, García, and Tena (2009) in financial sector have found that perceived value has an indirect influence on customer loyalty via customer satisfaction. Since literature proved the importance of perceived value-customer satisfaction-customer loyalty linkage, so this study includes this relationship to be examined in the cellular sector of Pakistan as well. Hence it is hypothesized that

H_{15b}: Customer satisfaction mediates the relationship between perceived value and customer loyalty.

2.7.1.3 Sales Promotion-Customer Satisfaction-Customer Loyalty

Literature suggested that the customers with repeat purchases are profitable for the company. At the same time, it cannot be claimed that every repurchase has ended up in customer commitment to the seller. Consequently, organizations need to plan marketing activities that will not only influence customer's commitment but also influence them to make repeat purchases. Sales promotion as a part of marketing tools helps to develop commitment toward the seller and encourage them to purchase and rephrase a product or service. Influence of sales promotion on customer's behaviour has been extensively researched in the literature (Omotayo, 2011).

Sales promotion has effects on various aspects of consumer's purchase decisions such as their choices, purchase time, quantity and loyalty directly and indirectly (Omotayo,

2011; Ubeja, 2014). For example, Dimiyati (2015) have studied the indirect impact of sales promotion on customer loyalty via customer satisfaction in the cellular sector and found a significant impact of customer satisfaction as a mediator. Similarly, Baig, Rehman, Saud, Aslam, and Shafique (2015) and Dutsenwai et al. (2015) found similar results for mediating role of customer satisfaction between the relationship of sales promotion and customer loyalty for online shoppers and for consumers of petrol stations respectively. On contrary, Wahab and Hassan (2015) do not find this indirect relationship significant for Hijab consumers. These inconsistent results call for further examination of this relationship. Hence it is hypothesized that

H_{15c}: Customer satisfaction mediates the relationship between sales promotion and customer loyalty.

2.7.1.4 Perceived CSR-Customer Satisfaction-Customer Loyalty

Carroll (1979, 2004) and Saeidi et al. (2015) believed that improving the quality of product or services keeping social concern in focus helps to increase customer satisfaction. Consumer's CSR perception has been noted to affect consumer satisfaction and develop positive attitudes toward a firm (Bhattacharya & Sen, 2004; Eisingerich, Rubera, Seifert, & Bhardwaj, 2010). Another researcher said that customer satisfaction is positively affected by perceived CSR (Alafi & Hasonah, 2012). As a result of customer satisfaction, there will be fewer customer defections, more repurchases and loyalty toward the service provider and it helps to increase returns, reduce cost and generate more profit (Chung, Yu, et al., 2015; Saeidi et al., 2015).

Another study via web-based survey in China found that perceived CSR has a significant positive impact on customer satisfaction (Chung, Yu, et al., 2015). Sindhu and Arif (2017) have studied the impact of perceived CSR on customer loyalty via customer satisfaction as a mediator in cellular sector. The results support the notion that customer satisfaction plays the role of mediator for CSR-customer satisfaction-customer loyalty linkage.

Similarly, Pérez and Bosque (2015) in the banking sector and Chang and Yeh (2017) in transportation sector have studied customer satisfaction as a mediator between the relationship of perceived CSR and customer loyalty and found significant positive results. This mediating effect also proved significant in the cellular service sector of Pakistan (Islam et al., 2013).

Opposite to this, Swimberghe and Wooldridge (2014), Barcelos et al. (2015) and Onlaor and Rotchanakitumnuai (2010) researched the same relationship of perceived CSR-customer satisfaction-customer loyalty, but they did not study the role of customer satisfaction as mediator. Moreover, Galbreath and Shum (2012) did not find customer satisfaction to be a significant mediator for CSR-customer satisfaction and firm performance linkage. Therefore, these mixed results call for studying the customer satisfaction as a mediator for perceived CSR and customer loyalty linkage. So this study adds customer satisfaction as a mediator for perceived CSR and customer loyalty linkage. Hence it is hypothesized that

H_{15a}: Customer satisfaction mediates the relationship between perceived corporate social responsibility and customer loyalty.

2.7.1.5 Summary of Past Studies used Customer Satisfaction as Mediator

Table 2.10 outlined the past studies which have used customer satisfaction as a mediator between the exogenous variables (PSQ, PV, SP, and PCSR) and customer loyalty.

Table 2. 10

Summary of Past Studies used Customer Satisfaction as Mediator

Author	Setting	Linkage	Mediation Effect
Chang and Yeh (2017)	Bus Service	PSQ-CS-CL	Sig,(Positive)
Han and Hwang (2014)	Medical Clinics	PSQ-CS-CL	Sig,(Positive)
Lee (2013)	Cellular Sector	PSQ-CS-CL	Sig,(Positive)
Deng et al. (2010)	Instant Messaging	PSQ-CS-CL	Sig,(Positive)
Lai et al. (2009)	Cellular Sector	PSQ-CS-CL	Sig,(Positive)
El-Adly and Eid (2016)	Shopping Malls	PV-CS-CL	Sig,(Positive)
Munhurrun et al. (2015)	Tourism Industry	PV-CS-CL	Sig,(Positive)
Deng et al. (2010)	Instant Messaging	PV-CS-CL	Sig,(Positive)
Lai et al. (2009)	Cellular Sector	PV-CS-CL	Sig,(Positive)
Roig et al. (2009)	Financial Services	PV-CS-CL	Sig,(Positive)
Turk et al. (2015)	Tourism Industry	PV-CS-CL	Sig,(Positive)
Lee (2010)	Cellular Sector	PV-CS-CL	Sig,(Positive)
Deng et al. (2010)	Instant Messaging	PV-CS-CL	Sig,(Positive)
Dutsenwai et al. (2015)	Petrol Stations	SP-CS-CL	Sig,(Positive)
Baig et al. (2015)	Online Buyers	SP-CS-CL	Sig,(Positive)
Dimyati (2015)	Cellular Sector	SP-CS-CL	Sig,(Positive)
Wahab and Hassan (2015)	Hijab Consumers	SP-CS-CL	Not Supported
Sindhu and Arif (2017)	Cellular Sector	PCSR-CS-CL	Sig,(Positive)
Chang and Yeh (2017)	Bus Service	PCSR-CS-CL	Sig,(Positive)
Park et al. (2017)	Consumer Perception About CSR	PCSR-CS-CL	Sig,(Positive)
Barcelos et al. (2015)	Banking Sector	PCSR-CS-CL	No findings
Pérez and Bosque (2015)	Banking Sector	PCSR-CS-CL	Sig,(Positive)
Swimberghe and Wooldridge (2014)	Restaurant Industry	PCSR-CS-CL	No findings
Islam et al. (2013)	Cellular Sector	PCSR-CS-CL	Sig,(Positive)

Source: Compiled by Author

2.7.2 Customer Trust as a Mediating Variable to Customer Loyalty

2.7.2.1 Perceived Service Quality-Customer Trust-Customer Loyalty

Customer trust serves a central role in making sure that customer patronage is customer loyalty. Morgan and Hunt (1994) define trust as confidence in the exchange partner's reliability and integrity. Trust also signifies the perceived credibility and benevolence of the business (Doney & Cannon, 1997). As indicated by Singh and Sirdeshmukh (2000), trust is a vital element that defines results at various points in buyer-seller relationship and functions as the strong glue that binds them together. Hence, greater trust should bring about greater loyalty.

Apart from having a major influence on loyalty, trust also mediates the effect of perceived service quality on customer loyalty. The relationship between perceived service quality, customer trust, and customer loyalty is described by Arasli, Turan Katircioglu, and Smadi (2005) research in the banking industry of Cyprus. They have demonstrated that service providers can infuse trust and confidence among customers as a result of delivering high quality, interacting with them professionally, handling their issues in a competent manner, providing them prompt services and having the employees who are readily available to help them then customers will take a step further by recommending the service provider to others (i.e., being loyal). Another study in the perspective of cellular customers conducted by Dahiyat et al. (2011) in Jordan's cellular service sector supports this notion that trust mediates the relationship between service quality and customer loyalty. Similarly, Auh (2005) studied the mediating effect of trust between service quality and customer loyalty in Australian hair care service setting and found trust to be a mediator for proposed relationship.

Opposite to this there are some studies in cellular sector by Raza and Rehman (2012), Nasir et al. (2014) in Pakistan and Amin et al. (2012) in Malaysia who studied the linkage of perceived service quality-trust and customer loyalty but didn't study the mediating impact of trust between this linkage. Similarly, in other settings like banking Rasheed and Abadi (2014) in Malaysia and Barcelos et al. (2015) in Brazil didn't study mediation of trust. Since previous studies have shown that trust is a mediator for service quality and customer loyalty linkage (Marakanon & Panjakajornsak, 2017), so the absence of mediation analysis in the other studies calls for further examination of mediation effect of customer trust between perceived service quality and customer loyalty to extend the existing body of literature. So this study adds customer trust as a mediator between perceived service quality and customer loyalty. Hence it is hypothesized that

H_{16a}: Customer trust mediates the relationship between perceived service quality and customer loyalty

2.7.2.2 Perceived Value- Customer Trust-Customer Loyalty

Perceived value as a construct draw attention of marketing scholars especially it has been studied many times in service literature because of its importance in the service industry Cronin et al. (2000). Perceived value is referring to customers' assessments of what is fair, right, or deserved for the perceived cost of the offering (Bolton & Drew, 1991). Perceived value has a direct link with customer trust (Harris & Goode, 2004). This view supports the idea about the interaction of perceived value and customer trust that trust is the main and key factor during the exchange process, which is resultant of the already established construct, namely, perceived value (Harris & Goode, 2004).

In the cellular service sector of Finland, the research found that perceived value significantly and positively affect customer trust (Karjaluoto et al., 2012). Similarly, Wang (2014) reported that perceived value has a significant positive impact on trust on selling agent in tax paying Chinese enterprise. Past studies have demonstrated that customer trust has a direct or indirect impact on customer loyalty. For example, Chaudhuri and Holbrook (2001) have shown that customer trust has a direct positive impact on both the purchase and attitudinal loyalty.

In positioning value, trust and loyalty in the conceptual model, they propose a value–trust–loyalty relationship in which trust is a mediator of value on loyalty. Reason being when a customer received good quality of services consistently, they perceived to receive a high value. This value in turns begins to inculcate trust on seller and loyalty in later stages. Chiou, Wu, and Chuang (2010) and Morgan and Hunt (1994) also supported this opinion in their studies, they claim that customer trust act as a mediator between loyalty and its determinants. This is evident by a study conducted in Finland’s cellular sector where trust plays the role of mediator between perceived value and customer loyalty (Karjaluoto et al., 2012). Rahmani et al. (2017) have also highlighted the mediating role of customer trust for the relationship of perceived value and customer loyalty in hospital industry.

These arguments stressed upon the importance of trust as a mediator between the linkage of perceived value and customer loyalty and provide the opportunity to study the same relationship in Pakistani telecom sector.

Hence it is hypothesized that

H_{16b}: Customer trust mediates the relationship between perceived value and customer loyalty

2.7.2.3 Sales Promotion- Customer Trust-Customer Loyalty

Sales promotions are part of the marketing mix and marketers fulfil short-term goals with the help of sales promotion. Aaker (1973) demonstrates that promotional activities are short-term marketing tools used by manufacturers, sellers or retailers. This tool of marketing is used to encourage consumers and retailers to buy a particular product more in quantity.

Customer trust is one of the consequences of sales promotion among all other outcomes as it also helps to generate customer trust (Pi & Huang, 2011). For example, research in the automotive industry of Malaysia found that sales promotion strategies help to enhance customer trust (Hilman & Hanaysha, 2015). Subsequently Pi and Huang (2011) have studied the mediating effect of trust between sales promotion and customer loyalty in the airline industry of China. The study found that trust mediates the relationship significantly and positively.

On contrary, Baig et al. (2015) do not found a significant role of customer trust as a mediator between the relationship of sales promotions and customer loyalty for online buyers. Since there is a lack of studies on sales promotion-trust- customer loyalty linkage particularly in the cellular sector so, this study will fill the gap in the literature by studying this relationship. Hence it is hypothesized that

H_{16c}: Customer trust mediates the relationship between sales promotion and customer loyalty.

2.7.2.4 Perceived CSR- Customer Trust-Customer Loyalty

Trust in the service provider relates to the insights about the service provider's honesty, integrity, ethicality, and confidentiality (Coulter & Coulter, 2002). Moreover, trust is an essential element for all kind of relationships. Most of the CSR activities focused on a broad range of social concerns and are perceived to fulfil social obligations. These perceptions about the social conduct of the organizations in turn, evoke trust in customers for the seller.

Furthermore, CSR initiatives may be particularly effective in evoking value-based trust or trust founded on personal values, especially with consumer's sensitive to ethical, social, and environmental issues (Pivato et al., 2008). Two empirical studies which state about the sale of organic and fair-trade items claimed that CSR policies impact the level of trust, the consumers have on the seller, for example, customers exhibit trust on the seller who is more socially responsible (Castaldo, Perrini, Misani, & Tencati, 2009; Pivato et al., 2008). So it is asserted that when consumers believe a company is engaged in CSR efforts, this behaviour will evoke a perception of "confidence in the exchange partner's reliability and integrity" (Morgan & Hunt, 1994; Swimberghe & Wooldridge, 2014).

Apart from this, recent studies incorporate trust as a mediator between the relationship of perceived CSR and customer loyalty (Martínez & Bosque, 2013). A study conducted by Sindhu and Arif (2017) in cellular service sector found that trust mediates the relationship between CSR and customer loyalty. In the same vein, Semuel and Chandra (2014) studied the mediating role of trust between the relationship of CSR and customer loyalty in the cosmetic industry of Indonesia and found similar results. While

another study in the banking sector of Brazil studied perceived CSR, trust and customer loyalty but didn't study the mediating impact of trust between CSR-CL linkage (Barcelos et al., 2015). Similarly, in the study of Swimberghe and Wooldridge (2014) in restaurant industry of USA, there is the absence of mediation analysis between CSR-trust-CL linkage.

Interestingly Martínez and Bosque (2013) analysed four models for studying the CSR-trust – customer loyalty linkage in the hotel industry of Spain and found different results like in model one trust fully mediates the indirect relationship of CSR and customer loyalty. While in model three, no mediation occurs. Additionally, in model four, there is partial mediation. So these mixed results suggest to further study this relationship in this study. Hence, these mixed findings call for further examination of this relationship. Hence it is hypothesized that

H_{16a}: Customer trust mediates the relationship between perceived corporate social responsibility and customer loyalty.

2.7.2.5 Summary of Past Studies used Customer Trust as Mediator

Table 2.11 outlined the past studies which have used customer trust as a mediator between the exogenous variables (PSQ, PV, SP, and PCSR) and customer loyalty.

Table 2. 11
Summary of Past Studies used Customer Trust as Mediator

Author	Setting	Linkage	Mediation affect
Marakanon and Panjakajornsak (2017)	Electronic Products	PSQ-CT-CL	Sig.(Positive)
Raza and Rehman (2012)	Cellular Sector	PSQ- CT -CL	No findings
Rasheed and Abadi (2014)	Banking, Insurance and Cellular Sector	PSQ- CT -CL	No findings

Nasir et al. (2014)	Cellular Sector	PSQ- CT -CL	No findings
Amin et al. (2012)	Cellular Sector	PSQ- CT -CL	No findings
Dahiyat et al. (2011)	Cellular Sector	PSQ- CT -CL	Sig,(Positive)
Auh (2005)	Hair Care Setting	PSQ- CT -CL	Sig,(Positive)
Rahmani et al. (2017)	Hospital Industry	PV- CT -CL	Sig,(Positive)
Karjaluoto et al. (2012)	Cellular Sector	PV- CT -CL	Sig,(Positive)
Sindhu and Arif (2017)	Cellular Sector	PCSR- CT -CL	Sig,(Positive)
Halim and Hermawan (2017)	Airline Industry	PCSR- CT -CL	Sig,(Positive)
Park et al. (2017)	Consumer Perception about CSR	PCSR- CT -CL	Sig,(Positive)
Martínez and Bosque (2013)	Hotel Industry	PCSR- CT -CL	Sig,(Positive)
Baig et al. (2015)	Online Buyers	SP-CT-CL	Not Supported
Pi and Huang (2011)	Airline industry	SP-CT-CL	Sig,(Positive)

Source: Compiled by Author

2.8 Moderating Role of Government Regulations

The government of Pakistan is playing a significant regulatory role in the cellular service by developing the quality of service standards, tariff awareness guide, and consumer protection directorate as already elaborated (section 1.3.5). However, the literature on the role of government regulations in the cellular service sector is scarce. Few authors, like Park, Yeon, Kim, Kim, and Ha (2005) have studied the influence of government regulations in the cellular service sector of Korea and found it to be a significant influencer on cellular subscriber behaviour. Similarly, Abbasi et al. (2016) have highlighted the impact of government regulations on cellular consumers in the cellular service sector of Pakistan conceptually.

Furthermore, Kumar et al. (2013) conducted a qualitative research via interviews in United States, Canada, Europe, Asia, and Australia and proposed a conceptual framework to study the moderating role of government regulations between the relationship of marketing mix variables including perceived service quality, sales promotion, perceived value and customer specific attitudinal variables including

customer satisfaction and customer trust to achieve customer loyalty. They stressed to empirically study the moderating role of government regulations for nurturing customer loyalty in emerging economies of Asia.

Apart from this, Kim, Kim, Suh, and Zheng (2016) have also studied the moderating role of government regulations between the relationship of R&D activities and the innovation for SMEs. Similarly, Obaji, Adekanbi, and Obiekwe (2015) have studied the moderating role of government regulations between financial resources and incubator performance. In the same vein, another study by Shariff, Peou, and Ali (2010) considered government regulation as a moderator between entrepreneurship and performance growth of SMEs. Many other studies like Ramanathan, Ramanathan, and Ko (2014) in logistics, Abdullah and Hussin (2010) in private manufacturing sector, Kimani, Mouni, Wanjau, and Mungatu (2015) in water utilities sector have studied the moderating role of government regulations and found it as a significant moderator in these diverse sectors.

The previous literature about government regulations (whereby government regulations is synonymous with external factors) (Chien & Shih, 2007) in the domain of perceived behavioral control (Kiriakidis, 2017) supports the moderating influence of external factors between the relationship of customer attitudes and behavior (Fishbein & Ajzen, 2011; Hennessy, 2012; Sheeran & Abraham, 2003). For example, a study conducted by Martinez and Lewis (2016) for health communication campaigns in the USA found that perceived behavioural control is a significant moderator for attitude and behavioural linkage. Similarly, Saleem (2017) studied the moderating role of government policy between the relationship of green product purchase intention and environmentally

responsible consumer buying behaviour whereby government policy plays the role of a significant positive moderator. Hence, supporting the argument to hypothesized government regulations as a moderator between the linkage of attitudes (perceived service quality, perceived value, sales promotions, perceived CSR, customer satisfaction and customer trust) and behaviour (customer loyalty).

In addition, according to Baron and Kenny (1986), moderating variables are established in a situation whereby an irregular / inconsistent relationship exists connecting a predictor and a criterion variable. Past literature shows that perceived service quality (section: 2.4.1.1), perceived value (section: 2.4.2.1), sales promotion (section: 2.4.3.1), corporate social responsibility (section: 2.4.4.1), customer satisfaction (section: 2.4.5.1), and customer trust (section: 2.4.6.1) have inconsistent findings for their direct impact on customer loyalty.

Hence this study keeping in view the scarcity of existing literature to address the moderating role of government regulations for the direct determinants of customer loyalty hypothesized the following relationships:

H_{18a}: Government regulations moderate the relationship between perceived service quality and customer loyalty.

H_{18b}: Government regulations moderate the relationship between perceived value and customer loyalty.

H_{18c}: Government regulations moderate the relationship between sales promotions and customer loyalty.

H_{18d}: Government regulations moderate the relationship between perceived corporate social responsibility and customer loyalty.

H_{18e}: Government regulations moderate the relationship between customer satisfaction and customer loyalty.

H_{18f}: Government regulations moderate the relationship between customer trust and customer loyalty.

2.9 Research Framework

This study derived a research framework, according to the literature review as discussed previously. The framework characterises network of different hypothesized relationships which are pertinent to the prevailing issue for analysing the problem (Hair, Money, Samouel, & Page, 2007; Sekaran, 2006). As such, the research framework is a conceptual model that explains theoretically or logically established relationships between various factors that have been determined as significant to the problem (Sekaran, 2006). Conceptualisation, in fact, gravitates along three main factors, for example, finding the constructs, proposing the hypotheses, envisaging the proposed hypotheses with the help of a diagram (Hair et al., 2007).

Figure 2.2 displays the research framework for this study. The framework demonstrates exogenous variables, namely perceived service quality, perceived value, sales promotion, and perceived corporate social responsibility, followed by two mediators which are customer satisfaction and customer trust, government regulations as a moderator and an endogenous variable customer loyalty.

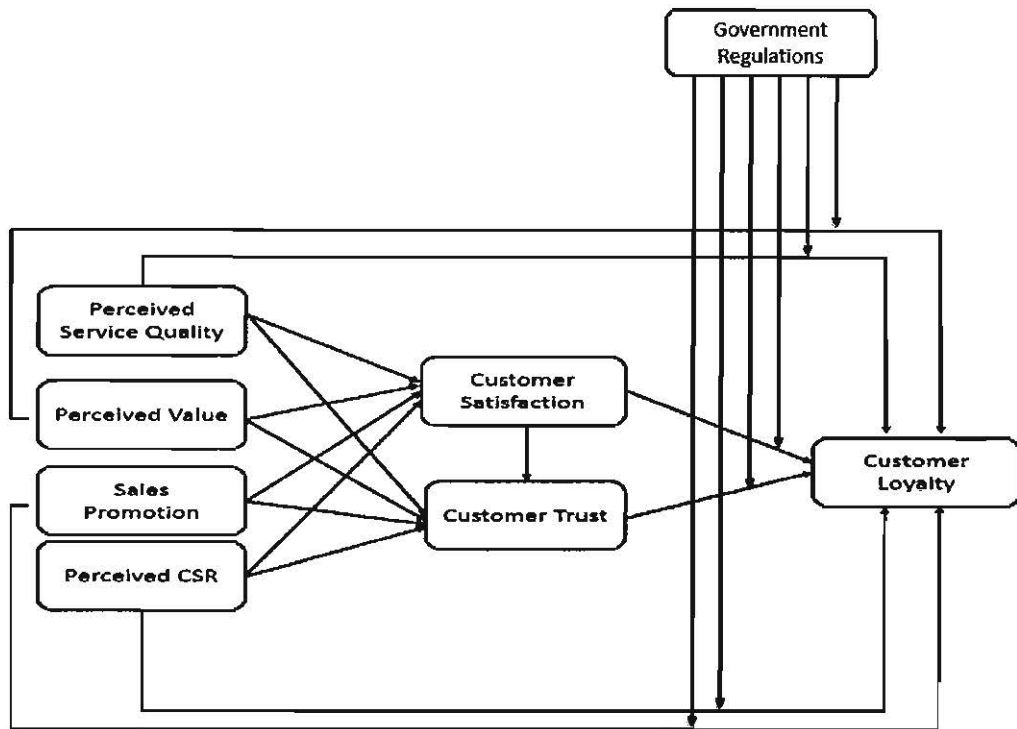


Figure 2. 2
Research Framework

2.10 Chapter Summary

This chapter highlighted the underpinning theories and their relevance to the constructs under study. Moving forward, it discussed customer loyalty, its direct determinant, mediating and moderating effects with the help of past studies in cellular and non-cellular settings. It ends up presenting the research framework.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

This chapter discusses the operationalization of constructs and research design. The research design is further explained with the help of questionnaire design, measurement of constructs, population, sampling size and sampling method. It also includes the results of pilot study, data screening methods and data analysis techniques.

3.2 Operationalization of Constructs

The operational definitions of the constructs under study are given in table 3.1.

Table 3. 1
Operational Definitions of Constructs

Construct	Definition	Source
Customer Loyalty	Repeat buying (next-use) with re-patronizing a preferred cellular service provider, and willingness to recommend preferred cellular service provider's services to family and friends.	Karjaluoto et al. (2012)
Perceived Service Quality	The customer's perception of a product's or service's overall excellence or superiority from the perspective of five dimensions of service, i.e.: tangibility, empathy, assurance, responsiveness and reliability.	Parasuraman, Berry, and Zeithaml (1991)
Perceived Value	Perceived value is the evaluation of the relative rewards and sacrifices associated with the offering compared to competitor's offerings.	Yang and Peterson (2004)
Sales Promotions	Sales promotions are the monetary and non-monetary benefits and incentives for the purpose of attracting new and existing customers who are contemplating to switch the cellular service provider and expect to use the services of competitors.	Buil, Chernatony, and Martínez (2013)

Perceived CSR	The degree of customer's perception of service provider's support for the social cause and social activities.	Lee, Park, and Pae (2011)
Customer Satisfaction	Customers' personal post-purchase overall evaluation of pleasure with the cellular service provider and viewing it as a cumulative experience.	Edward and Sahadev (2011)
Customer Trust	Customer trust is the customer's perception of honesty, reliability, responsibility, and motives/intentions of the cellular service provider.	Smith (1997)
Government Regulations	Customers' perceptions about government regulations depict customer's confidence in regulations for protecting consumer interests through regulating marketing activities of service providers, developing a regulatory body and controlling selling process.	Jain and Goel (2012)

Source: Compiled by Author

3.3 Research Design

Research design explains the questionnaire design, measurement of constructs, sampling techniques and methods used for data collection (Bryman, 2003). Sekaran and Bougie (2016) explain that research design describes the procedures followed for data collection and data analysis to find the solution for the stated problem.

This study used the quantitative method for data collection because numbers (Likert scale) are used to measure the constructs under study (Hair, Black, Babin, Anderson, & Tatham, 1998). This study adopts a survey research design. A survey method is adopted when a study is trying to assess thoughts, feelings, and opinions about a given situation by collecting primary data from the respondents (Fisher, 2007). The survey method allows the researcher to gather quantitative data and analyse it using parametric and non-parametric statistics (Saunders, 2009).

Since, survey research provides a fast, cheap, efficient and accurate assessment and information about a given population (Zikmund, Babin, Carr, & Griffin, 2013). Therefore, a survey method using the questionnaire as the instrument for data collection is found to be more appropriate for this study. Since the individual cellular service consumer is the unit of analysis for the present study so this study considers each cellular service consumer's response as an individual data source. Moreover, this study gathered data and describes the characteristics of the population of the study at one time and not over a long period of time; therefore, this study is a cross-sectional study.

Furthermore, the seven-point Likert scale is used to gather response on each question since this scale is widely used and tested in both marketing and social sciences research (Garland, 1991). The following sections further explain the research design in depth.

3.3.1 Questionnaire Design

A questionnaire must be designed with specific research objectives in mind. The questionnaire is designed based on the suggestions of Ekinici (2015). For this purpose, firstly, the items to measure the variables/concepts in the study and the target participants are identified. Second, a draft questionnaire is prepared. Related to this step, considerations on the language, wording, sequence of items, and format are made.

Finally, the items in the questionnaire are pilot tested (Section 3.5) to assess whether they could be easily and clearly understood. At this stage too, the validity and reliability of the measures used are examined. Moreover, the items related to the constructs under study are measured on 7 points Likert scale, following the suggestion of Allen and

Seaman (2007). The 7-point Likert scale is used because it adds additional granularity (Dawes, 2012).

The questionnaire is given in Appendix B and it has three sections i.e. Section A consists of two filter questions and questions related to constructs under study. Section B inquire about cellular consumer's characteristics and section C collect information about consumer's demographics. During the designing of the questionnaire to minimize the biases, three aspects considered important. These included the wording of the questions, the planning of how the constructs are categorized and the general appearance of the questionnaire (Sekaran & Bougie, 2016).

The questionnaire is originally developed in English (Appendix B.1) which is translated into Urdu Language (Appendix B.2), which is subsequently put through back to back translation process ensuring that such translation also made proper sense confirming finally that the Urdu language translation done in the beginning was appropriate. This back to back translation was done by two language academicians.

3.3.2 Measurement of Constructs

Measurement scales for the constructs under study are adapted from previous researches. Most of the constructs are already tested in cellular sector and service settings and found to be reliable for further research. Some modifications are made in the wordings of items/statements to maintain consistency among the variables. The questionnaire (instrument) consists of eight constructs which have four exogenous variables (perceived service quality, perceived value, sales promotion, perceived corporate social responsibility) two mediators (customer satisfaction and customer trust), one moderator (government regulations) and one endogenous construct

(customer loyalty). The following section describes the measurement of each construct in detail.

3.4.2.1 Customer Loyalty

Customer loyalty scale consists of 5 items adapted from Karjaluoto et al. (2012) who have tested this scale in the cellular service setting. Its Cronbach alpha's reliability is as high as of .920. This is a reflective scale measured on a seven-point Likert scale. The summary of the items of customer loyalty is given in table 3.2.

Table 3. 2
Customer Loyalty Measurement Scale

No	Items	Source and Reliability
1	I am a loyal customer of my cellular service provider.	Karjaluoto et al. (2012)/ α : .920
2	I will buy more services of my cellular service provider in next few years.	
3	I consider my current cellular service provider my first choice for cellular services.	
4	I have said positive things about my cellular service provider to my family and friends.	
5	I have recommended my cellular services provider to someone who sought my advice.	

Source: Customer Loyalty Scale adapted from Karjaluoto et al. (2012).

3.4.2.2 Perceived Service Quality

SERVQUAL instrument proposed by Parasuraman et al. (1991) is adapted to measure perceived service quality in this study. It is a well-established instrument, and its psychometric properties are tested through previous studies (Asubonteng, McCleary, & Swan, 1996; Zhao, Bai, & Hui, 2002). Moreover, it is widely used in literature to measure perceived service quality in service sector especially in cellular sector. Many recent studies in cellular sector adapted this scale for measuring service quality (Alnsour et al., 2014; Boohene & Agyapong, 2011; Mokhtar et al., 2011). It's

Cronbach's alpha reliability is as high as .93 (Parasuraman et al., 1991) so it is quite suitable to adapt this scale for this study.

This study has operationalized SERVQUAL as first order reflective second-order formative construct which has five sub-dimensions e.g. tangible, reliability, responsiveness, assurance and empathy with 22 items. This operationalization is developed on the notion that perceived service quality in cellular service setting is a summative judgment that takes place from evaluating numerous dimensions. This formative judgment dictates that perceived service quality is a second order formative construct. Moreover, a group of researchers have also supported this narrative and criticized reflective operationalization of perceived service quality in the following manner. For example Rossiter (2002, p. 314) emphasised the formative nature of perceived service quality in the following way:

“An example of an attribute that can be a formed attribute is SERVICE QUALITY [. . .] If the experts decide that the target raters are likely to make this summative type of judgment, then SERVICE QUALITY is a formed attribute [. . .] SERVICE QUALITY is actually a second-order formed attribute in that its components (Reliability, Assurance, etc.) are also reflective attributes.”

Furthermore, recent literature on electronic service quality (e-service quality) also supports the formative measurement of service quality which operationalised it as a higher order formative construct (Collier & Bienstock, 2006, 2009; Ladhari, 2009; Parasuraman, Zeithaml, & Malhotra, 2005; Rabaa'i & Gable, 2012). Indeed, Parasuraman et al. (2005), proposed the new scale of electronic service quality operationalised as formative and suggest that it is more appropriate to treat service quality as a formative construct. Similarly, Collier and Bienstock (2006, pp. 271-272) have elaborated that service quality does not cause to evaluate the reliability or

assurance. Quite the contrary, reliability and assurance help to develop perception and evaluation of service quality. In the light of these valid arguments, there is a concern about the past results of perceived service quality where it has been operationalized as a reflective construct. Hence based on these comprehensive arguments, this study considers SERVQUAL as first order reflective second-order formative construct to address this rarely studied phenomenon in past studies.

Furthermore, one global item is also adapted from Parasuraman et al. (2005) to access the overall service quality on the seven-point Likert scale in addition to 22 item of SERVQUAL. Global item is added because formative construct needs to be theoretically/conceptually refined by adding one global item (Hair, Hult, Ringle, & Sarstedt, 2016). It is also required to summarize the essence of the construct, the formative indicators purport to measure (Sarstedt, Ringle, & Hair, 2014). Jarvis, MacKenzie, and Podsakoff (2003) have outlined the basic distinction between formative and reflective constructs which is given in Appendix C. Table 3.3 shows the total items used to measure perceived service quality.

Table 3. 3
Perceived Service Quality Measurement Scale

No.	Item	Source and Reliability
(i) Tangible		
1	My cellular service provider has modern equipment and technology.	Parasuraman et al. (1991) and Parasuraman et al. (2005)/a.:93
2	My cellular service provider's physical facilities are visually appealing.	
3	My cellular service provider's staff well dresses and appear neat.	
4	Materials associated with the services (e.g. pamphlets for latest offers/bundles and tariffs) are visually appealing at service centres of my cellular service provider.	
(ii) Reliability		

No.	Item	Source and Reliability
5	When my cellular service provider promises to do something by certain time, it does do.	
6	When I have a problem, my cellular service provider shows sincere interest in solving it.	
7	My cellular service provider performs the service right at the first time.	
8	My cellular service provider provides its services at the time it promises to do so.	
9	My cellular service provider always keeps the error-free record of billing.	
(ii)	Responsiveness	
10	The staff of my cellular service provider tells me exactly when services will be performed.	
11	The staff of my cellular service provider give me prompt services.	
12	The staff of my cellular service provider are always ready to help me.	
	The staff of my cellular service provider are never too busy to respond to my requests.	
(iv)	Assurance	
14	The behaviour of staff of my cellular service provider instils confidence in customers.	
15	I feel safe in doing transactions with my cellular service provider.	
16	The staff of my cellular service provider are consistently courteous with me.	
17	The staff of my cellular service provider have adequate skills and knowledge to resolve customer's problems.	
(v)	Empathy	
18	The staff of my cellular service gives me individual attention.	
19	My cellular service provider's service centres have operating hours convenient for all its customers.	
20	My cellular service has the staff who give me personal attention.	
21	The staff of my cellular service provider has my best interests at heart	
22	The staff of my cellular service provider understand my specific needs.	
23	Overall service quality of my cellular service provider is (Very poor-Excellent)	

Source: Perceived Service Quality Scale adapted from Parasuraman et al. (1991) and Parasuraman et al. (2005).

The seven points Likert scale from strongly disagree being 1 to strongly agree being 7 is used for 22 items adapted from (Parasuraman et al., 1991) and seven points Likert

scale from very poor being 1 to excellent being 7 is used to measure the global item adapted from Parasuraman et al. (2005).

3.4.2.3 Perceived Value

Items for measuring the perceived value are adapted from the study of Yang and Peterson (2004). This is a unidimensional reflective construct measured with four items with a reliability coefficient of .80. This scale has also been tested in the cellular service sector by Chen and Cheng (2012) and the reliability coefficient reported by the researcher is 0.81 which is high enough to adapt this scale for this study. Table 3.4 shows the total number of items adapted to measure this variable. The scale is measured on 7 points Likert scale from strongly disagree being 1 to strongly agree being 7.

Table 3. 4
Perceived Value Measurement Scale

No.	Items	Source and Reliability
1	The services offered by my cellular service provider are worthy of the purchase I made, compared to competitors.	Yang and Peterson (2004) / α : .81
2	My cellular service provider charges me fairly for similar products and services offered by competitors.	
3	Compared to competitors, my cellular service provider offers me more free services.	
4	Compared to what I pay to what I get, the services offered by my cellular service provider are value for money compared to competitors.	

Source: Perceived value scale adapted from Yang and Peterson (2004).

3.4.2.4 Sales Promotion

Sales promotion is divided into two dimensions i.e. monetary and non-monetary sales promotions (Chandon et al., 2000). According to Jarvis et al. (2003) when the items/sub-dimensions cannot be interchanged and every item/sub-dimension captures a unique part of the construct, the construct is formative. Monetary and non-monetary

sales promotions are unique and non-interchangeable dimensions. Moreover, Hair, Sarstedt, Ringle, and Gudergan (2017) suggests that when a construct has multiple dimensions with a similar theme and conceptual unity, they are considered as composite formative constructs. As sales promotion consists of two dimensions (monetary and non-monetary) with conceptual unity, it is considered as a composite first-order reflective second-order formative (type two) construct in the current study. Moreover, Jacob and Jacob (2017) also stressed to study sales promotions as a formative construct.

The instrument used to measure the sales promotion is adapted according to cellular sector setting from Buil et al. (2013) with eight items. The scale has Cronbach's alpha reliability greater than .90. Moreover, one global item is adapted from Sirohi, Laughlin, and Wittink (1998) to summarize the overall crux of the construct. The reliability coefficient is high enough to adapt this scale for this study.

Table 3. 5
Sales Promotion Measurement Scale

No	Items	Source and Reliability
(i)	Monetary Sales promotions	
1	My cellular service provider frequently offers monetary/ cash rewards.	
2	My cellular service provider frequently offers lucky draw to win cash, motorbike, car or gold etc.	
3	My cellular service provider frequently offers price discounts.	
4	My cellular service provider offers price discounts more frequently than competitors.	
(ii)	Non- Monetary Sales Promotions	
5	My cellular service provider frequently offers free minutes.	
6	My cellular service provider frequently offers free SMS bundles.	
7	My cellular service provider frequently offers free internet bundles	
8	My cellular service provider offers free minutes, SMS and internet bundles more frequently than competitors.	
9	Overall sales promotions offered by the cellular service provider are (Very poor-Excellent).	

Buil et al. (2013) and
Sirohi et al. (1998)/
SP CR > .90

Source: Sales promotion Scale adapted from Buil et al. (2013) and Sirohi et al. (1998).

The seven points Likert scale from strongly disagree being 1 to strongly agree being 7 is used for eight items adapted from Buil et al. (2013) and seven points Likert scale from very poor being 1 to excellent being 7 is used to measure the item adapted from Sirohi et al. (1998). Table 3.5 shows the total number of items adapted to measure this variable.

3.4.2.5 Perceived CSR

The scale for perceived CSR is adapted from Lee et al. (2011) with high Cronbach's alpha reliability of .93. It is a uni-dimensional reflective scale which consists of five items measuring consumer perception of CSR. The scale is measured on 7 points Likert scale from strongly disagree being 1 to strongly agree being 7. The items are given in Table 3.6.

Table 3. 6
Perceived CSR Measurement Scale

No	Items	Source and Reliability
1	My cellular service provider helps to solve social problems.	Lee et al. (2011) / α : .93
2	My cellular service provider has a strong sense of corporate social responsibility.	
3	My cellular service provider makes adequate contributions to the well-being of the local community.	
4	My cellular service provider allocates some of its resources to philanthropic activities.	
5	My cellular service provider plays a role in the society that goes beyond the mere generation of profits.	

Source: Perceived CSR Scale adapted from Lee et al. (2011)

3.4.2.6 Customer Satisfaction

Customer satisfaction is measured through three items, considering it a unidimensional reflective scale. It is adapted from Edward and Sahadev (2011), who have studied customer satisfaction in cellular service setting of India. This scale's Cronbach's alpha

reliability value is as high as .91. The adapted items are expected to produce valid outcomes due to relevancy in the similar setting and geographical proximity.

Table 3. 7
Customer Satisfaction Measurement Scale

No.	Items	Source and Reliability
1	The cellular services given by my cellular service provider are satisfactory.	Edward and Sahadev (2011) / α : .91
2	I feel good about my decision to choose my current cellular service provider.	
3	Overall I am happy with my current cellular service provider.	

Source: customer satisfaction scale adapted from Edward and Sahadev (2011).

3.4.2.7 Customer Trust

Customer trust is measured through five items taken from Smith (1997) with Cronbach's alpha reliability of .86. It is a unidimensional reflective scale. Few researchers like Chiou and Droge (2006) and Karjaluoto et al. (2012) have also used the same scale to measure customer trust in service settings including cellular services sector. Since this scale has the highest reliability in the cellular sector, it is equally useful to adapt this instrument for this study too. The scale is measured on 7 points Likert scale from strongly disagree being 1 to strongly agree being 7. Scale statements are given in Table 3.8.

Table 3. 8
Customer Trust Measurement Scale

No.	Items	Source and Reliability
1	My cellular service provider is very honest.	Smith (1997) / α : .86
2	My cellular service provider is very responsible.	
3	My cellular service provider is always professional.	
4	My cellular service provider acts with good intentions.	
5	My cellular service provider can be trusted at all times.	

Source: Customer trust scale adapted from Smith (1997).

3.4.2.8 Government Regulations

The scale for government regulations is adapted from Jain and Goel, (2012) with Cronbach alpha reliability of .72. This is a one-dimensional formative construct which consists of five items to represent composite formative indicators of government regulations (Coltman, Devinney, Midgley, & Venaik, 2008; Hair et al., 2017; Thongrattana, 2010). It is composite in a way that it includes the following items: defining minimum quality standards, testing the quality of services, marketing activities, protecting and promoting the interests of consumers. All these items contribute to define the role of government regulations as a whole. One of them (item 5) is a global item which summarizes the essence of the construct. The scale is measured on 7 points Likert scale from strongly disagree being 1 to strongly agree being 7. Scale statements are given in Table 3.9.

Table 3. 9
Government Regulations Measurement Scale

No	Items	Source and Reliability
1	The government sets minimum standards of quality for all the services sold by cellular service providers.	Jain & Goel (2012) / α : .72
2	The government tests the quality of services provided by cellular service providers and make the results of these tests available to customers.	
3	The government exercises more responsibility for regulating the marketing activities done by cellular service providers.	
4	The intervention of government is necessary to protect the interests of customers.	
5	In general, stricter control of cellular sector by government is preferable to self-regulation by cellular service providers.	

Source: Government regulations Scale adapted from Jain & Goel (2012).

3.4.2.9 Summary of the Adapted Scales

The summary of adapted scales along with the number of items, reliability and setting are given in Table 3.10.

Table 3. 10
Summary of Adapted Scales

No	Construct	items	Source	Setting
1	Customer Loyalty	5	Karjaluoto et al. (2012)	Cellular sector
2	Perceived Service Quality	23	Parasuraman et al. (1991) and Parasuraman et al. (2005)	Service sectors including cellular sector
3	Perceived Value	4	Yang and Peterson (2004)	Online service users
4	Sales Promotion	9	Buil et al. (2013) and Sirohi et al. (1998)	Consumers goods
5	Perceived CSR	5	Lee et al. (2011)	Consumers perceptions about firms CSR activities
6	Customer Satisfaction	3	Edward and Sahadev (2011)	Cellular sector
7	Customer Trust	5	Smith (1997)	Sales representatives
8	Government Regulations	5	Jain and Goel (2012)	Consumer goods

Source: Compiled by Author

3.3.3 Population

The population of Pakistan is divided into four provinces which are Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa (KPK). The total population of Pakistan comprises of 193,251,142 individuals as of the year 2016. So cellular services consumers are distributed all across Pakistan. Population statistics of Pakistan is given in Table 3.11

Table 3. 11
Pakistan Population Statistics for the Year 2016

Province	Population (Individuals)	Percentage (%)
Punjab	108,671,644.5	56
Sindh	44,446,360.94	23
KPK	25,908,548.9	13
Baluchistan	14,224,587.66	7
Total	193,251,142	100

Source: Pakistan Bureau of Statistics (2016).

The population of this study consists of all the cellular service subscribers residing in four provinces of Pakistan totalling 133,241,465 cellular service subscribers until the year 2016 (Pakistan Telecommunication Authority, 2016a). The whole cellular service consumer market is divided unequally into prepaid and post-paid consumers. According to Butt (2015), there are 97% prepaid subscribers in Pakistan. Since more than 50% of the cellular subscribers consist of prepaid users so this study is confined to prepaid cellular consumers only. Moreover, prepaid consumers are more likely to switch the cellular service provider so they are a true representative of consumers who lack loyalty toward the cellular service operator (Bajaj, Gupta, Shetty, & Uppal, 2010).

Table 3. 12
Cellular Consumers for the Year 2016

Mobile Operator	Cellular Consumers	Percentage %
Mobilink	39,118,521	29.36
Telenor	38,020,771	28.54
Zong	25,251,329	18.95
Ufone	19,833,670	14.89
Warid	11,017,174	8.27
Total	133,241,465	100

Source: Pakistan Telecommunication Authority (2016a).

Therefore, it is necessary to study the determinants of customer loyalty in the cellular services sector for prepaid consumers. Based on the statistics of Pakistan Telecommunication Authority's (2016a) annual report the cellular service subscribers base is given in Table 3.12.

3.3.4 Sampling Size

According to Sekaran and Bougie (2016), it is not possible to collect data from every individual in the population. Hence, a particular sample is used to examine a small

subset or portion of the population for data collection (Cavana, Delahaye, & Sekaran, 2001). So, this study has collected data from the capital cities of all the four provinces of Pakistan i.e Lahore (Punjab), Karachi (Sindh), Quetta (Baluchistan) and Peshawar (KPK). The sample size is determined on the basis of the recommendation given by Krejcie and Morgan (1970) which is given in Table 3.13. Since the population of Pakistan is higher than one million, the sample size of 384 respondents is sufficient to represent the population of Pakistan.

Table 3. 13
Sample Size Rule of Thumb

Population (N)	Sample Size (n)
10,000	370
15,000	375
20,000	377
30,000	379
40,000	380
50,000	381
75,000	382
1,000,000	384

Source: Krejcie and Morgan (1970).

3.3.4.1 Determination of Sample Size

This study defines sampling size with the help of stratified disproportionate sampling technique. Pakistan consists of four subgroups (provinces) which are Punjab, Sindh, Baluchistan and KPK with distinct cultural diversity (Shah & Amjad, 2011). Hence, a stratified sampling technique is used for calculating the sample size for each province. Additionally, the population of Pakistan and cellular service subscriber base is divided into unequal proportions into the four provinces of Pakistan so each stratum is further defined on a disproportionate basis.

So the sample size is defined by following few steps. First of all, Pakistan is divided into four provinces which are subgroups or strata: Punjab, Sindh, Baluchistan and KPK.

The second step is to define proportions to collect data. Since the count for the population in each province and the cellular consumer's proportions for each cellular operator are available. This helps to divide 384 questionnaires among each of these strata. This process further involved two steps. First of all, proportions for 384 questionnaires is calculated according to population distribution in each province which is given in table 3.14.

Table 3. 14
Sample Size Determination for Each Province

Province	Population	Proportion	Questionnaire Proportion
Punjab (Lahore)	108671644.5	56.23%	216
Sindh (Karachi)	44446360.94	23%	88
KPK (Peshawar)	25908548.9	13.41%	52
Baluchistan (Quetta)	14224587.66	7.36%	28
Total	193251142	100%	384

Source: Pakistan Bureau of Statistics (2016).

The second step involves proportional allocation of this count according to cellular operators' consumers. This is shown in table 3.15. So this calculation helps to allocate proportion to each province based on cellular consumers' percentages. This type of sample size determination has also been done for studying customer loyalty in cellular service sector previously (Aydin & Özer, 2005). It helps to precisely measure the number of questionnaires distributed in each province for each cellular service provider. So, this study used stratified disproportional approach to determine the sample size for each province (city) and each operator.

The response rate in cellular service sector of Pakistan is 65% to 70% (Iqbal & Shah, 2016; Rasool, Kiyani, Siali, Ting, & Shakur, 2017) so 600 questionnaires are distributed to achieve the minimum sample size of 384, at the respective customer services centres of all cellular service providers. The last column in table 3.15 shows the actual count of questionnaires (600 questionnaires) which are distributed to achieve the minimum sample size of 384.

Table 3. 15
Sample Size Determination for Each Cellular Service Provider

Province		Punjab (Lahore)	Sindh (Karachi)	KPK (Peshawar)	Baluchistan (Quetta)	Pakistan	Actual Distribution Count
Population Proportion		56.23%	23.00%	13.41%	7.36%	100%	
Operator	Market Share	216	88	52	28	384	600
Mobilink	29.36%	63	26	15	8	113	176
Telenor	28.54%	62	25	15	8	110	171
Zong	18.95%	41	17	10	5	73	114
Ufone	14.89%	32	13	8	4	57	89
Warid	8.27%	18	7	4	2	32	50
Total	100%	216	88	52	28	384	600

3.3.5 Sampling Method and Data Collection Procedure

This study used mall intercept technique for data collection. The extant literature revealed that past studies conducted in Pakistan (Ahmad et al., 2015; Butt & de Run, 2009; Danish et al., 2015; Khan, 2010) and non-Pakistan studies (Hafez & Akther, 2017; Morgan & Govender, 2017) have also used non probability sampling technique for studying the determinants of customer loyalty in cellular service settings.

As already mentioned in determination of sampling size (section 3.3.4.1) the data is collected from Lahore, Karachi, Peshawar and Quetta based on population and cellular

consumers' proportions. As customer service centres are the hub of cellular services (Okibo & Ogwe, 2013; Siddique, Akterujjaman, & Perveen, 2012) and offer full range of services which are exclusively available at customer service centres (Mustafa, 2016; Ufone, 2017). So, each operators' main customer service centres are approached in the four cities for data collection from real customers (Appendix D).

The data is collected through a personal-administered questionnaire from every ninth customer who visits the cellular service provider for some services or information. Respondents are approached when they are going to visit the customer service centres and upon their will, they are requested to fill the questionnaire and return back at their departure from customer service centre. The participants are also informed of receiving a key chain or a pen as a reward for their participation upon return of the filled questionnaire.

Moreover, the researcher herself collected the data from Mobilink customer service centre in Lahore (Punjab), while for rest of the customer services centres in Lahore (Punjab), Karachi (Sindh), Peshawar (KPK) and Quetta (Baluchistan), research assistant is hired for data collection.

The researcher demonstrated the questionnaire to the research assistant and give him the proper directions for data collection. He was further told to contact the researcher immediately if he faces any confusion for interpretation and elaboration of the questionnaire to the respondents.

The researcher and the research assistant worked for two and a half month from 1 December 2016 to 22 February 2017 at the customer services centres of respective

operators in two shifts i.e. 9am-12pm and 2pm-5pm. On average 8 to 10 questionnaires have been collected each day.

3.4 Pilot study

According to a group of researchers, Sekaran and Bougie (2011), Hair et al. (2007), and Hair, Black, Babin, and Anderson (2010) content validity entails requiring a few samples of intended respondents or/and team of specialists to make a judgment on the appropriateness of the items used to measure a variable. Therefore, feedback is taken from a group of experts (two academicians of marketing and two experts in the cellular service sector of Pakistan). They have shared some valuable insights regarding the wording of the items in the questionnaire which are incorporated into actual data collection questionnaire.

Additionally, before administrating the final instrument for data collection, it is used for conducting a pilot study. The pilot study is comprised of 100 cellular service subscribers of Pakistan, however, 96 usable questionnaires have been considered for preliminary analysis.

Moreover, pilot study helps to measure the estimated time to complete a questionnaire and highlighted the vague sentences in the questionnaire. So, the feedback of respondents is incorporated in the final questionnaire for data collection.

In addition, pilot testing helps to check the reliability of each construct in the instrument. One of the selected criteria for internal consistency of the scales is Cronbach's alpha reliability. This is checked by considering Cronbach's alpha reliability coefficients with a minimum value of .70 (Nunnally, 1978). As highlighted

by the results in table 3.16, the Cronbach's alpha reliability coefficients is above the minimum threshold for all the constructs under study. So the scales are reliable enough to proceed towards the actual data collection.

Table 3. 16
Reliability Test of Pilot Study

Construct	No. of Items	Cronbach's Alpha
Tangible	4	.737
Reliability	5	.863
Responsiveness	4	.799
Assurance	4	.789
Empathy	5	.814
Perceived Value	4	.792
Monetary Sales Promotions	4	.803
Non-monetary Sales Promotions	4	.729
Perceived CSR	5	.896
Customer Satisfaction	3	.845
Customer Trust	5	.919
Government Regulations	5	.791
Customer Loyalty	5	.897

3.5 Data Screening Method

Data screening is used to find out the factors which can cause to violate the key assumptions about multivariate analysis (Hair, 2007).

Before starting the data screening process, all the 392 returned questionnaires are coded and recorded into the SPSS version 20. Afterwards, the following methods are used for screening purpose : (1) missing data analysis, (2) assessment of outliers, (3) normality

test and (4) non-response bias (5) Multicollinearity (Hair et al., 2010; Tabachnick, Fidell, & Osterlind, 2001). These screening tests are detailed in below section.

3.5.1 Missing Value Analysis

When the respondent fails to answer a question or more in the questionnaire it results in missing data. According to Hair, Hult, and Christian (2013), missing values should be replaced using mean when there are less than 5% missing values per item. So this study used mean replacement for the treatment of missing values.

3.5.2 Assessment of Multivariate Outliers

When a particular response is far away from other responses in data, it is considered as an outlier. There might be different reasons for outliers for example variation in the measurement items (Churchill & Iacobucci, 2006). Most probably, the outlier is the result of measurement error or it indicates that the population suffers hard-tail distribution. It is very important to investigate the outliers in data because the presence of outliers can distort statistical results (Hair et al., 2010).

Tabachnick and Fidell (2013) suggested to use Mahalanobis D^2 measure to find out the multivariate outliers in data. Using Mahalanobis D^2 measure to identify the multivariate outliers also consider the univariate outliers (Hair et al., 2010). Hence, Mahalanobis D^2 is calculated using linear regression methods in IBM SPSS version 20, followed by the computation of the Chi-square value. This is done by looking at the chi-square table at a significance level of 0.001 with respect to the number of predictors of the dependent variable. So this study uses Mahalanobis D^2 measure for assessing outliers.

3.5.3 Normality Test

This study used a graphical approach for testing the normality of data (Tabachnick & Fidell, 2013). Field (2013) suggests using graphical approach to test normality when the sample size is two hundred or more. He adds, when the sample size is large it is appropriate to look at the shape of data distribution rather than the skewness and kurtosis values. Field (2013) further elaborates that large samples causes to decrease the standard errors and expands the value of skewness and kurtosis. Hence, this study used a graphical approach to test normality.

The normality probability plot (P-P) is a graphical approach used to check either a data set is approximately normally distributed or not (Chambers, Cleveland, Kleiner, & Tukey, 1983). The data is drawn against a theoretical normal distribution whereby the drawn points of actual data should form an approximately straight line. If the data is drawn far away from that theoretical normal distribution, it shows a departure from normality. Hence, following Field (2013) suggestion, this study used the normal probability plot to test the normality of data.

3.5.4 Non-Response Bias

In order to estimate the possibility of non- response bias, Armstrong and Overton (1977) suggested a time-trend extrapolation approach, which entails comparing the early and late respondents (i.e., non-respondents). They argued that late respondents share similar characteristics with non-respondents. So this study used the Levene's Test for Equality of Variance to check the non-response bias in the data.

3.6 Data Analysis Technique

Data analysis is done in four sections. The first three sections consist of parametric tests such as demographics analysis, characteristics of cellular service consumers and descriptive analysis, which are conducted using SPSS Version 20. The fourth section consists of non-parametric tests such as model evaluation based on structural equation modelling using two-stage approach. This study used Partial Least Squares Structural Equation Modelling (PLS SEM version 3.2.7) approach for model evaluation.

3.6.1 Partial Least Squares Structural Equation Modelling

Structural equation modelling has become an important approach when it comes to investigating the cause and effect relations between latent constructs (Hair, Ringle, & Sarstedt, 2011). Generally, PLS SEM is a path modelling statistical method used for modelling complex multivariate analysis of relationships between observed and latent variables. The PLS SEM approach is a strong, superior and flexible tool for the statistical model building as well as testing and predicting theory (Lowry & Gaskin, 2014; Robins, 2012). Afthanorhan (2013) stresses that reliable and valid confirmatory factor analysis is better achieved using PLS SEM path modelling.

Several research areas including social sciences and consumer behaviour used PLS SEM as an appropriate statistical method (Hair et al., 2016). This is because it has the ability to assess inner and outer model (Hair et al., 2016; Henseler, Ringle, & Sinkovics, 2009).

Moreover, PLS SEM supports to analyse the complex models which have both mediators and moderators (Lowry & Gaskin, 2014). In addition, it has no restriction for

using interaction term for testing moderation compared to other covariance based techniques, so it is quite feasible for testing moderating effects.

Lastly, it can estimate both reflective and formative hierarchical component models (HCM) (Hair et al., 2017). Therefore, this study used Smart PLS 3.2.7 to determine the outer and inner model.

3.6.2 Two-Stage Approach

Since this study includes both reflective and higher order formative constructs, so two-stage approach (also known as sequential latent variable score method) in PLS-SEM is used to cater the impact of higher-order constructs (HOCs) in the model (Becker, Klein, & Wetzels, 2012; Ringle, Sarstedt, & Straub, 2012; Wetzels, Schröder, & Oppen, 2009).

This two-stage approach (sequential latent variable score method) is advantageous in a way that it determines the latent variable scores (LVS) for first order reflective constructs (Chin, 1998; Lohmöller, 2013; Tenenhaus, Vinzi, Chatelin, & Lauro, 2005). These estimated LVS are used to estimate the first order reflective constructs in the first stage (in absence of second order formative constructs), later in a separate second stage these LVS are used as indicators for second-order formative constructs (Agarwal & Karahanna, 2000; Becker et al., 2012; Hiram, Chuah, Cheah, Memon, & Yacob, 2015; Wetzels et al., 2009; Wilson & Henseler, 2007).

The process of two-stage approach (sequential latent variable score method) is detailed in figure 3.2 to explain the evaluation of measurement model and structural model. So according to Becker et al. (2012) and Hair et al. (2016) in stage one, confirmatory factor

analysis, internal consistency, convergent validity and discriminant validity of the first order reflective constructs are evaluated (excluding all formative constructs) via an algorithm to analyse the reflective measurement model.

Moreover, the latent variable scores are extracted from stage one to use for the development of the second stage for evaluation of formative constructs. At the second stage, measurement model evaluation of formative constructs is done by convergent validity through redundancy analysis, multi-collinearity and outer weights significance (after bootstrapping). Moreover, this model at stage two is also used to evaluate the direct, mediating and moderating effect hypothesised in this study by evaluating the inner model (structural model).

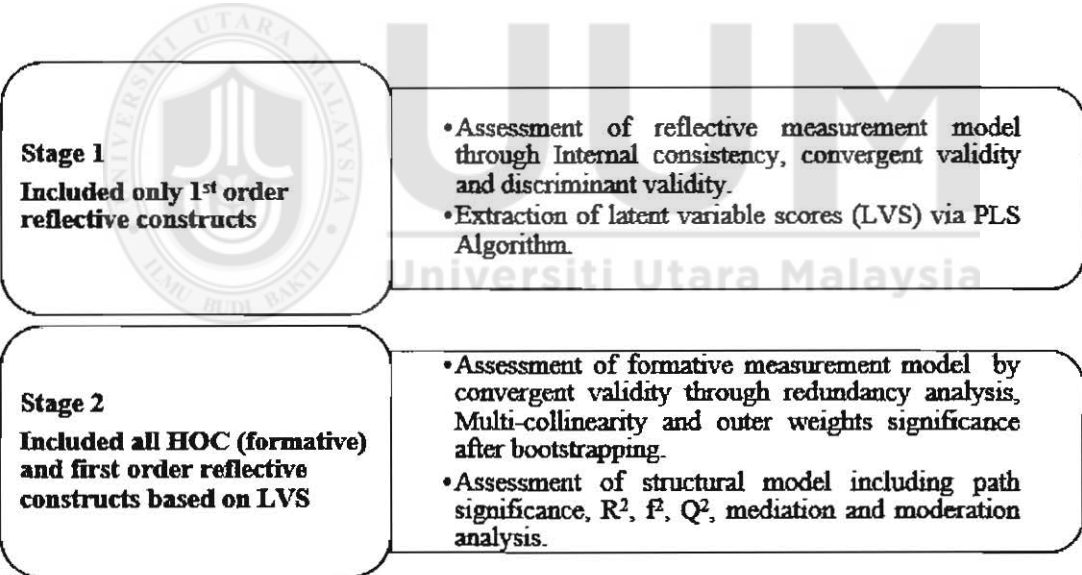


Figure 3. 1

Steps of Two-Stage Approach

Source: Figure developed based on literature given by Becker et al. (2012) and Hair et al. (2016).

3.6.2.1 Assessment of Reflective Measurement Model (Stage 1)

The reflective measurement model (outer model) is examined (in stage one), using Smart PLS 3.2.7 algorithm. As suggested by Hair et al. (2016) assessment of reflective measurement model included outer loadings to analyse individual indicator reliability, composite reliability to evaluate internal consistency and average variance extracted (AVE) to evaluate convergent validity. Assessment of reflective measurement model also included discriminant validity. The Fornell-Larcker criterion is used to examine discriminant validity.

Table 3. 17
Reflective Constructs

Construct	Hierarical Order	Nature
Tan	First Order	Reflective
Rel	First Order	Reflective
Resp	First Order	Reflective
As	First Order	Reflective
Emp	First Order	Reflective
PV	First Order	Reflective
SPM	First Order	Reflective
SPN	First Order	Reflective
PCSR	First Order	Reflective
CS	First Order	Reflective
CT	First Order	Reflective
CL	First Order	Reflective

Note: Tan: Tangibles, Rel: Reliability, Resp: Responsiveness, As: Assurance, Emp: Empathy, SPM: Monetary Sales Promotion, SPN: Non-Monetary Sales Promotion, CT: Customer Trust.

This study operationalized tangibles, reliability, responsiveness, assurance, empathy, perceived value, monetary sales promotions, non-monetary sales promotions, perceived corporate social responsibility, customer satisfaction, customer trust and customer loyalty as first order reflective constructs as shown 3.17.

3.6.2.2 Assessment of Formative Measurement Model (Stage 2)

As already explained this study has three formative constructs, two of which are second order formative constructs: perceived service quality (PSQ), sales promotion (SP) and one first-order formative construct: government regulations (GR) as shown in table 3.18. Since formative measurement model evaluation criteria are different from reflective measurement model, so this section address the evaluation of formative constructs only.

Table 3. 18
Formative Constructs

Construct	Hierarchical Order	Nature
PSQ	Second Order	Formative
SP	Second Order	Formative
GR	First Order	Formative

The steps involve assessment of the formative measurement model includes convergent validity, multicollinearity and significance of outer weights after bootstrapping. Convergent validity is the extent to which a measure correlates positively with other (e.g., reflective) measures of the same construct using different indicators. Hence, when

evaluating formative measurement models, it is necessary to test whether the formatively measured construct is highly correlated with a reflective measure of the same construct with a path coefficient of at least 0.50 (Hair et al., 2013). This type of analysis is also known as redundancy analysis (Chin, 1998). The term redundancy analysis stems from the information in the model being redundant in the sense that it is included in the formative construct and again in the reflective one. Specifically, one has to use the formatively measured construct as an exogenous latent variable predicting an endogenous latent variable operationalized through one or more reflective indicators. So this study included one reflective measure for each of the formative constructs to conduct a redundancy analysis, whereby GPSQ (Global item perceived service quality), GSP (Global item Sales Promotion), and GGR (Global item Government regulations) are the reflective indicators which are used as the global items for conducting redundancy analysis for their respective formative constructs.

Unlike reflective indicators, which are essentially interchangeable, high correlations are not expected between items in the formative measurement models. Hence, the second step for formative measurement model evaluation is conducting multi-collinearity assessment through variance inflation factor (VIF).

Now the last step in assessing the formative measurement model is testing the nomological validity of the outer weights and their significance after running bootstrapping procedure in Smart PLS version 3.2.7. The significance of the outer weights reveals that the indicators are relevant for measuring the formative construct under study. In other words, the significance of outer weights expresses each indicator's

relative contribution to the construct or its relative importance to forming the construct. So this study used above-mentioned criteria to evaluate formative measurement model.

3.6.2.3 Assessment of Structural Measurement Model

As mentioned earlier, once the measurement model (outer model) is examined and the reliability and validity of the model are established, the next step is to evaluate the inner model (structural model) results. This involved assessing the inner model's predictive abilities and the relationships between the constructs. Following sections described direct paths, mediation analysis and moderation analysis in detail.

The first step is to assess the structural model for direct paths hypothesized in this study. According to Hair et al. (2016), following criteria is used for assessment of structural model in PLS SEM: the significance of the path coefficients (t-value, p-value and Biased Correct and Accelerated (BCa) bootstrap confidence intervals), coefficient of determination (R^2), the effect size (f^2) and predictive relevance (Q^2) which are used to estimate the direct paths hypothesized in this study.

3.6.2.3.1 The Direct Paths Coefficients

After running the PLS SEM bootstrap for 5000 times, the structural model results are used to analyse the direct path coefficients and their significance as hypothesized in the study.

There is a standard value for path coefficients between +1 and -1. The path coefficients with positive values show positive relationships and vice versa. Furthermore, the more the path coefficients are closer to one, the more strong relationship a variable has with its criterion variable. However, low values closer to zero indicate weak relationships.

To identify, either the coefficient is significant or not depends on its standard error which is calculated after bootstrapping. The bootstrap standard error allows calculating the t values and p values for assessing the significance of the hypothesized relationships in the structural model. Moreover, critical values are used to assess whether a relationship is significant or not, for example, commonly used critical values for two tail test are 1.96 (significance level = 5%), and 2.57 (significance level = 1%). In addition, the critical values for one-tailed tests are 1.65 (significance level = 5%), and 2.33 (significance level = 1%). In marketing, researchers usually assume a significance level of 5% (Hair et al., 2016). So this study used 1% and 5% significance level for interpreting the results.

In addition, p-value is also used to assess the level of significance of a relationship. A p-value is equal to the probability of obtaining a t-value at least as extreme as the one that is actually observed, conditional on the null hypothesis being supported. In other words, the p-value is the probability of erroneously rejecting a true null hypothesis (i.e., assuming a significant path coefficient when in fact it is not significant). When assuming a significance level of 5%, the p-value must be smaller than 0.05 to conclude that the relationship under consideration is significant at a 5% level. For example, when we assume a significance level of 5% and the analysis yields a p-value of 0.03 for a certain coefficient, we would conclude that the coefficient is significant at a 5% level. Correspondingly, when researchers want to be stricter in their testing of relationships and therefore assume a 1% significance level, the corresponding p-value must be smaller than 0.01 to indicate a relationship is significant.

The bootstrap confidence interval also allows testing whether a path coefficient is significantly different from zero. The confidence interval provides information on the

stability of the estimated coefficient by offering a range of plausible population values for the parameter dependent on the variation in the data and the sample size. The bootstrap confidence interval also used standard errors to specify a range of estimates the parameters of the population considering a certain level of confidence (e.g., 95%). If the biased corrected confidence interval does not include 0, the hypothesis is considered to generate the significant effect. Hence, this study also used the BCa bootstrap confidence intervals approach in line with the suggestion of Hair et al. (2016) for interpretation of the hypotheses as significant or insignificant.

3.6.2.3.2 The Coefficient of Determination (R^2)

After analysing the direct relationship and testing the hypothesis based on path coefficients (t-value, p-value and BCa bootstrap confidence intervals), one of the most commonly used criteria for assessing structural model is the coefficient of determination (R^2) of endogenous latent variables (Hair et al., 2016). This coefficient is a measure of the model's predictive power and is calculated as the squared correlation between a specific endogenous construct's actual and predicted values. The R^2 value ranges from 0 to 1, with higher levels indicating higher levels of predictive accuracy. According to Hair et al. (2016), R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables can, as a rule of thumb, be respectively described as substantial, moderate, or weak.

3.6.2.3.3 The Assessment of Effect Size (f^2)

Having assessed the coefficient of determination of the endogenous constructs, the next criterion assesses the effect size (f^2) as suggested by Hair et al. (2016). Effect size is the difference in R^2 between the main effects when the particular exogenous construct is in the model and when it is omitted from the model. This is done purposely to evaluate

whether the omitted exogenous construct has a substantial impact on the endogenous variables (Hair et al., 2016). Guidelines for assessing f^2 are that values of 0.02, 0.15, and 0.35, respectively, represent small, medium, and large effects of the exogenous latent variable (Cohen, 1988; Hair et al., 2016). However, Chin, Marcolin, and Newsted (2003) stressed that even the tiniest strength of f^2 should be considered as it can influence the endogenous variables.

3.6.2.3.4 The Predictive relevance (Q^2) Assessment

Another assessment of the structural model is the model's predictive relevance. The predictive relevance can be assessed using Stone–Geisser criterion, which assumes that an inner model must be able to provide evidence of prediction of the endogenous latent construct's indicators (Henseler et al., 2009). Hence, predictive relevance Q^2 assessment can be carried out using Stone-Geisser's Q^2 test which can be measured using blindfolding procedures (Hair et al., 2016). Therefore, this study used Stone-Geisser test to assess the Q^2 , through blindfolding procedure to obtain the cross-validated redundancy measure for endogenous latent construct (Hair et al., 2016).

3.6.2.3.5 Mediation Test

The objective of mediation analysis is to examine if the mediating variable is significant to carry the effect of an independent variable (Ramayah, Lee, & In, 2011). So, mediation analysis evaluates the effect of the exogenous latent variable on the endogenous latent variable through an intervening variable.

Preacher and Hayes (2008) observed that there are various techniques for conducting the mediation analysis, for example, causal steps strategy or serial approach (Hoyle &

Robinson, 2004), which follows the four assumptions of Baron and Kenny (Baron & Kenny, 1986). Another approach to test mediation is Sobel test which is also called the product of coefficient method (Sobel, 1982). Nowadays, the most prominent approach to conduct mediation analysis is bootstrapping method, which generates an empirical distribution of sample to assess the indirect effect (Hayes, 2009; Rucker, Preacher, Tormala, & Petty, 2011).

The bootstrapping method starts with estimating the path model of an exogenous variable with a mediator (path a) and the relationship between the mediator and the dependent variable (path b). These path models include the path coefficients and t-values using PLS-SEM algorithm and bootstrapping procedure, respectively (Hair et al., 2016). The focus is on whether the independent variables and the mediator relationship and mediator and dependent variable relationship are significant. This is necessary but not sufficient to conclude mediation effect. Lastly, the product of the two significant path coefficients is divided by the standard error of the product ($\frac{a*b}{Sab}$) to examine the significance of the indirect effect.

The justification and advantages of bootstrapping method to test mediation have been highlighted by several studies (Hair et al., 2016; Hayes, 2012; Hayes & Preacher, 2010; Preacher & Hayes, 2008). For instance, the four conditions of Baron and Kenny (1986) fail to involve the use of standard errors (Hayes & Preacher, 2010). The Sobel test has the assumption that indirect effect should have normal sample distribution. However, the distribution of the sample for the independent variables' effect on the mediator and the mediator's effect on the dependent variable is asymmetric (Preacher & Hayes, 2008). The distribution of the product strategy is a little difficult to use without the aid

of tables and requires some assumptions of the normal sampling distribution (Hayes, 2009).

Shrout and Bolger (2002) argued that bootstrapping methods could be used to take care of the aforementioned flaws as it allows the distribution of the indirect effect to be tested empirically. Furthermore, Zhao, Lynch, and Chen (2010) argued that bootstrapping approach solves these problems by generating an empirical sampling distribution ($a \times b$). In addition, Hayes and Preacher (2010) conclude that the main advantage of bootstrapping approach is that it does not require any assumptions about the sampling distributions of the indirect effect or its product. In other words, the confidence interval in bootstrapping method can be asymmetrical rather than at regular confidence intervals in other methods. This is because they are based on an empirical estimation of the sampling distribution of the indirect effect, unlike other methods that assume normal sampling distribution. Similarly, bootstrapping result provides interval estimate of a population parameter that cannot be obtained by using other mediation tests (Lockwood & MacKinnon, 1998).

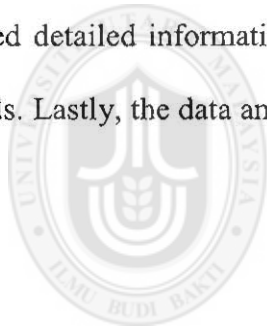
Knowing the advantage of bootstrapping method compared to other methods, Hair et al. (2016) and Hayes and Preacher (2010) suggest testing the significance of the mediation using bootstrapping methods. Hence this study used the bootstrapping method to test the indirect effects via PLS-SEM version 3.2.7 which provides specific indirect effects when there are two or more mediators in a model.

3.6.2.3.6 Moderation Test

Vinzi, Chin, Henseler, and Wang (2010) suggest that to conduct the moderation test follow two steps. Firstly, assess the direct impact of independent variables and moderating variable (as the independent variable) on the dependent variable. Secondly, include the interaction term in that model (Chin et al., 2003). The moderation is assessed based on the significance of the interaction term (Hair et al., 2016). So this study used this approach to access the moderating effect with the help of PLS SEM version 3.2.7.

3.7 Chapter Summary

This chapter starts with operationalization of constructs additionally, this chapter provided detailed information on the research design, pilot study and data screening methods. Lastly, the data analysis techniques have been discussed.



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CHAPTER FOUR

FINDINGS

4.1 Chapter Overview

This chapter reports the statistical results of the study. The chapter is divided into six sections. The first section presents the response rate and the second section explains data screening. The third, fourth and fifth sections present the demographic analysis, characteristics of cellular service consumers and descriptive analysis. Moreover, section six describes the measurement and structural models including direct relationships, mediation analysis, and moderation analysis. Lastly, the chapter concludes with a summary of the findings.

4.2 Response Rate

As stated in methodology, the data is collected from Lahore (Punjab), Karachi (Sindh), Quetta (Baluchistan) and Peshawar (KPK). Consequently, a total of 432 questionnaires are returned, recording a response rate of 72%. However, only 392 questionnaires are used for data analysis recording a valid response rate of 65% which is comparable to previous studies in the cellular service sector of Pakistan (Iqbal & Shah, 2016; Rasool et al., 2017).

The primary reasons for the exclusion of 40 questionnaires are: (1) 11 respondents have age group below 18 years (Gao & Rafiq, 2009) (2) 9 respondents have postpaid sim cards (3) 10 respondents have both prepaid and postpaid sim cards (4) 10 respondents provide incomplete responses. The detail of response rate is given in table 4.1.

Table 4. 1
Response Rate of Questionnaires

Cellular Operator	Mobilink	Telenor	Zong	Ufone	Warid	Total
Questionnaires Distributed	176	171	114	89	50	600
Questionnaires Returned	132	117	77	65	41	432
Response Rate	75%	68%	68%	73%	83%	72%
Excluded Questionnaire due to Age Group Below 18 Years	4	1	1	1	4	11
Excluded Questionnaires due to Post-Paid Sim Cards	4	3	0	1	1	9
Excluded Questionnaires due to Both Prepaid And Post-Paid Sim Cards	4	3	2	0	1	10
Excluded Questionnaires due to Incomplete Responses	5	3	0	1	1	10
Total Excluded Questionnaires	17	10	3	3	7	40
Total Useable Questionnaires	115	107	74	62	34	392
Valid Response Rate	65%	62%	65%	69%	69%	65%

4.3 Data Screening

The following screening methods are performed for this study: (1) missing value analysis, (2) assessment of outliers, (3) normality test and (3) non-response bias (Hair et al., 2010; Tabachnick & Fidell, 2013).

4.3.1 Missing Value Analysis

This study has less than 5% missing values per item (Appendix E). Hence missing values are replaced using mean replacement (Hair et al., 2016). Table 4.2 shows missing values for each construct.

Table 4. 2
Missing Values in Data Set (n=392)

Construct	Number of Missing Values
PSQ	9
PV	4
SP	6
PCSR	1
CS	2
CT	4
GR	4
CL	7

4.3.2 Assessment of Multivariate Outliers

This study assessed multivariate outliers with the help of Mahalanobis D^2 measure (Tabachnick & Fidell, 2007). Mahalanobis D^2 is calculated using linear regression method. The results (Appendix E) show that minimum value of Mahalanobis D^2 is 0.684 and the maximum value is 45.969. Given that there are seven predictors of customer loyalty in this study with a degree of freedom 7. The cutoff value for detecting multivariate outliers is 24.32 based on Chi-square table with $p < 0.001$. Any case with a Mahalanobis D^2 value of 24.32 and above is a multivariate outlier and should be removed. Hence, 4 cases are removed and remaining 388 questionnaires are used for further analysis.

4.3.3 Normality Test

The P-P normality plot shows that the data set is closer to the straight line. Hence the visual presentation in figure 4.1 reveals that the data set maintains the normal distribution.

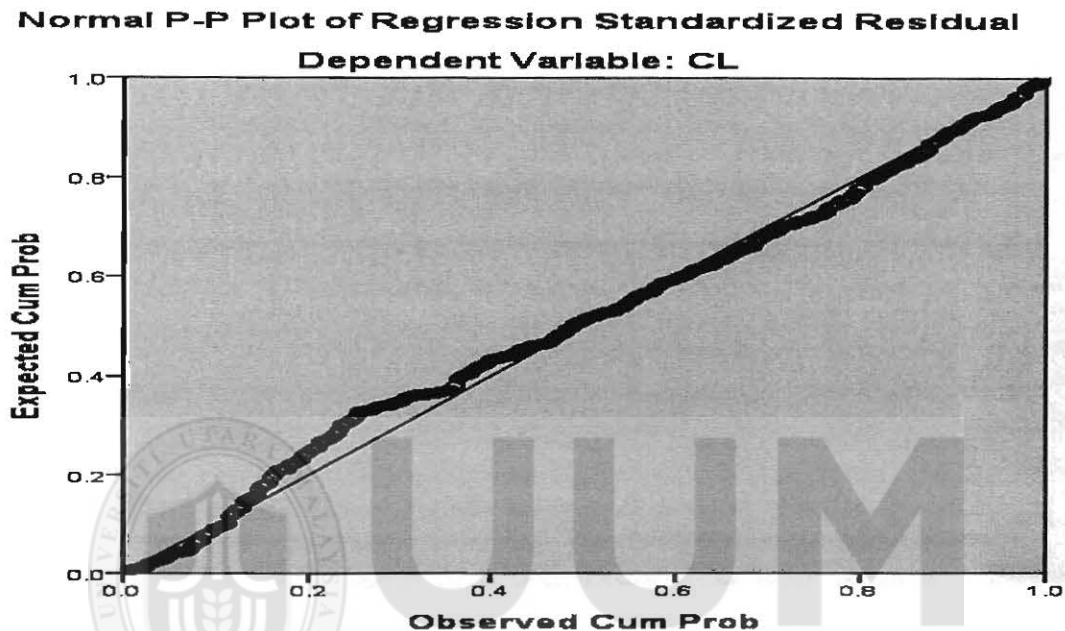


Figure 4. 1
P-P Normality Plot

4.3.4 Non-Response Bias

Following Armstrong and Overton (1977) approach, the present study conducted the Levene's Test for Equality of Variances for checking the non-response bias in data. For this purpose, the data has been divided into two main groups: those who responded within 32 days (i.e., early respondents) and those who responded after 32 days (i.e., late respondents). Majority of the respondents in the sample; that is 265 (68.29 %) responded to the questionnaires within 32 days, while the remaining 123, representing 31.70 % of the sample responded after 32 days.

Table 4. 3
Independent Samples Test (n=388)

Levene's Test for Equality of Variances			
Constructs	Sig.	T- Value	Sig. (2-tailed)
PSQ	.582	-.418	.676
		-.423	.673
PV	.694	-1.239	.216
		-1.233	.219
SP	.196	.311	.756
		.299	.765
PCSR	.309	.908	.364
		.872	.384
CS	.187	1.872	.062
		1.797	.074
CT	.908	.966	.335
		.968	.334
GR	.887	-1.348	.178
		-1.358	.176
CL	.543	.637	.525
		.623	.534

In particular, an independent samples t-test is conducted to detect any possible non-response bias for the constructs under study namely; perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction, customer trust, government regulations and customer loyalty. Table 4.3 presents the p-value significance level for Levene's Test for Equality of Variances. According to the results, p-value significance is greater than 0.05 significance level for all the variables under study, suggesting no response bias (Field, 2009; Pallant, 2010). The complete results of independent samples t-test are given in Appendix E.

4.4 Demographic Analysis

The demographic characteristics of respondents are described in this study include city, gender, age, education, marital status, position, job type, career level and average income level.

According to the demographic profile of respondents given in table 4.4, the largest proportion of respondents originated from the city of Lahore (Punjab) which is 54.9% of the total sample (213 respondents). Furthermore, 24% respondents (93 respondents) from Karachi (Sindh), 15.2% (59 respondents) from Peshawar (KPK) and only 5.9% (23 respondents) from Quetta (Baluchistan).

The majority of the respondents in the sample are males representing 54.1% (210 respondents) of the sample and the remaining 45.9% (178 respondents) are females. Shahzad Khan (2012) also shared similar demographic gender characteristics in cellular sector of Pakistan.

Furthermore, 50% respondents (194 respondents) are in the age group of 18-28 years. This is followed by 33.8% (131 respondents) in the age group of 29-39 years. Additionally, 10.6% (41 respondents) are in the age group of 40-49 years and 3.4% (13 respondents) are in the age group of 50-59 years. The smallest age group ranged between 60 years and above, which accounted for only 2.3% (9 respondents) of the sample. Existing studies on customer loyalty in cellular service sector of Pakistan entails similar inclination toward young age consumers ranging from 18-39 years and comprise of more than 60% of sample (Chattha et al., 2016).

According to the results, there is a high proportion of the respondents with bachelor's degree which accounted for 38.1% (148 respondents) of the total sample. This is followed by 36.1% respondents (140 respondents), who have an intermediate degree. The respondents with master's and above education are 15.2% (59 respondents) of the sample. The respondents with matric are 7% (27 respondents) while the remaining 3.6% (14 respondents) have middle and below level education.

Marital status is represented by three groups e.g. single, married and divorced/widow/widower. Most of the respondents are married representing 53.4% (207 respondents) of the sample. Moreover, 44.1% respondents (171 respondents) are single and remaining 2.6% respondents (10 respondents) are divorced/widow/widower.

Respondents are also asked to mention their position according to which 55.7% (216 respondents) are job holders. However, 24% (93 respondents) are self-employed and 16.2% (63 respondents) are students and only 4.1% (16 respondents) are household wives.

Job holders are further requested to mention their career level, so according to the results, 63.4% (137 respondents) belong to entry-level. In addition, 31.9% (69 respondents) are from mid-career level and only 4.6% (10 respondents) are from top management.

Job holders are also requested to mention their job type. The biggest group of job holders: 56.5% (122 respondents) have private jobs. Additionally, 23.1% (50 respondents) have semi-government jobs and 20.4% (44 respondents) have government jobs.

The largest proportion of the sample, 38.4% respondents (149 respondents) have an income level of PKR. 15001-32000. The second largest group in the sample is 22.7% respondents (88 respondents) having an income level of below PKR. 15000. This is followed by 12.4% (48 respondents) having an income level of PKR. 32001-49000. However, 9.8% (38 respondents), 9% (35 respondents) and 5.2% (20 respondents) belong to income level PKR 49001-66000, PKR 83001-100,000, PKR 66001-83000 respectively. The smallest part of the sample, 2.6% (10 respondents) have income level PKR 100,001 and above. The low income group of pre-paid cellular consumers also dominates the rest of the respondents in past studies conducted in cellular sector of Pakistan (Nasir et al., 2014).

Demographics results are detailed in Appendix E.

Table 4. 4
Demographic Profile of Respondents (n=388)

Demographics	Frequency	Valid Percentage (%)
City		
Lahore	213	54.90
Karachi	93	24.0
Quetta	23	5.90
Peshawar	59	15.20
Gender		
Male	210	54.10
Female	178	45.90
Age		
18-28 years	194	50.00
29-39 years	131	33.80
40-49 years	41	10.60
50-59 years	13	3.40
60 years and above	9	2.30
Education		
Middle and Below	14	3.60
Matric	27	7.00
Intermediate	140	36.10

Demographics	Frequency	Valid Percentage (%)
Bachelor	148	38.10
Masters and above	59	15.20
Marital Status		
Single	171	44.10
Married	207	53.40
Divorced/Widow or Widower	10	2.60
Position		
Student	63	16.20
Job Holder	216	55.70
Household Wife	16	4.10
Self-Employed	93	24.00
Career Level* (Job Holders Only)		
Entry Level	137	63.40
Mid-Career	69	31.90
Top Management	10	4.60
Job Type* (Job Holders Only)		
Private	122	56.50
Government	44	20.40
Semi-Government	50	23.10
Average Income		
Below PKR. 15000	88	22.70
PKR. 15001- 32000	149	38.40
PKR. 32001- 49000	48	12.40
PKR. 49001-66000	38	9.80
PKR. 66001- 83000	20	5.20
PKR. 83001-100,000	35	9.00
PKR. 100,001 and above	10	2.60

Note:*= Career level and job type are only for job holders (n=216) and the valid percentage is reported for them.

4.5 Characteristics of Cellular Service Consumers

The characteristics of cellular service consumers who participate in this study are given in table 4.5. All the 388 respondents have prepaid sim card connections. Most of the participants have Mobilink as their most frequently used cellular service provider which is 29.6% (115 respondents) of the total sample. This is followed by the respondents who are 27.6% (107 respondents) of the sample and use Telenor as their most frequent

cellular service provider. Subsequently, 18.6% respondents (72 respondents) and 15.5% respondents (60 respondents) have Zong and Ufone as their most frequent cellular service provider. Only 8.8% respondents (34 respondents) use Warid as their most frequent cellular service provider.

Respondents are also requested to mention the total number of sim cards each respondent own. A total of 36.6% respondents own one sim card representing 142 respondents of the sample. However, 30.9% have two sim cards making a count of 120 respondents. Similarly, 17.3% (67 respondents), 10.8% (42 respondents) and 4.4% (17 respondents) own 3, 4 and 5 sim cards respectively.

Most of the respondents in the sample mention that they have switched their cellular service providers, representing a proportion of 69.1% (268 respondents) while 30.9% (120 respondents) revealed that they have not switched their cellular service providers.

The respondents who have switched their cellular service provider are further asked to mention the reason for switching the cellular service provider. According to the responses, 40.7% respondents (109 respondents) have switched due to attractive call, SMS and internet packages of competitors. This is followed by the respondents who have switched due to network problem and accounted for 25.7% (69 respondents) of the sample. Moreover, 13.4% respondents (36 respondents) said that they have switched due to hidden charges while 10.4 % respondents (28 respondents) have switched due to friends and family. Only 9.7% respondents (26 respondents) have switched due to the distance from the service centre.

Most of the respondents, use both voice calls, SMS and internet packages, representing 52.5% (203 respondents) of the sample. Besides this, 33.2% (129 respondents) of the sample use voice call and SMS packages and only 14.4% of the sample (56 respondents) use internet packages.

Respondents are asked to mention reason (one reason or more than one reasons) for visiting customer service centre. Most of the respondents report that they visit customer service centre for biometric verification, representing a proportion of 64.4% (250 respondents) of the total sample. Subsequently, 57.7% (224 respondents) report that they visit customer service centre for sim purchase. Additionally, 30.4% (118 respondents) mention that they visit customer service centre for recharge purchase. Similarly, 20.6% (80 respondents), 8.8% (34 respondents), 8.2% (32 respondents), 2.6% (10 respondents) mention that the reason for visiting customer service centre is change of ownership, packages' information, financial services and sim replacement respectively.

Table 4. 5
Characteristics of Cellular Service Respondents (n=388)

Characteristics	Frequency	Valid Percentage (%)
Sim Type		
Prepaid	388	100
Post-Paid and Both	0	
Most Frequently Used Cellular Service Provider		
Mobilink	115	29.90
Telenor	107	27.60
Zong	72	18.30
Ufone	60	15.50
Warid	34	8.80
Sim Count		
1 Sim Card	142	36.60
2 Sim Cards	120	30.90

Characteristics	Frequency	Valid Percentage (%)
3 Sim Cards	67	17.30
4 Sim Cards	42	10.80
5 Sim Cards	17	4.40
Switching Behaviors		
No	120	30.90
Yes	268	69.10
^aReason for Switching		
Attractive Call, SMS and Internet Packages	109	40.70
Distance from Service Centre	26	9.70
Friends & Family	28	10.40
Network Problem	69	25.70
Hidden Charges	36	13.40
Packages Used		
Voice calls and SMS	129	33.20
Internet	56	14.40
Both	203	52.30
^bReason for Visiting Customer Service Centre		
Sim Purchase	224	57.70
Biometrics Verification	250	64.40
Recharge	118	30.40
Financial Services	32	8.20
Ownership	80	20.60
Sim Replacement	10	2.60
Packages' Information	34	8.80
^bCSR Activities Performed by Cellular Service Provider		
CSR-Education Sector	131	33.80
CSR-Health Care	77	19.80
CSR- Preserving Ecosystem	27	7.00
CSR-Disaster Relief	48	12.40
Facilitation of Handicapped Customers	3	0.80
No CSR	170	43.80

Note: (a): Reason for switching is only answered by those respondents who have switched their cellular service providers (n=268), so valid percentage is reported for them. (b): one or more than one responses are selected for this question.

The highest proportion of respondents believed that their cellular service provider does not perform any CSR activity, representing 43.8% (170 respondents) of the total sample. However, 33.8% respondents (131 respondents) report that their cellular service providers participate in CSR activities related to education sector (example: developing school facilities, training programs for teachers etc.). Similarly, 19.8%

respondents (77 respondents) report that their cellular service providers participate in CSR activities related to health care (example: developing medical facilities, blood donations etc.). Additionally, 12.4% respondents (48 respondents) mention that their cellular service providers participate in CSR activities related to disaster relief (example: support for earth quack, flood affected area etc. Only 7% (27 respondents) and .8% (3 respondents) participants report that their cellular service providers participate in CSR activities related to preserving ecosystem (example: plantation of trees, drinking water filtration etc) and facilitation of handicapped customers respectively.

4.6 Descriptive Analysis

The descriptive analysis of all the constructs under study is given in table 4.6. Among the constructs, customer loyalty (CL) has the highest mean ($M = 5.164$) and government regulations (GR) has the lowest mean (2.968).

Table 4. 6
Descriptive Analysis of Constructs

Construct	Mean	Std. Deviation
PSQ	5.006	1.045
PV	4.948	1.175
SP	4.549	1.293
PCSR	4.679	1.286
CS	5.125	1.272
CT	5.095	1.206
GR	2.968	1.192
CL	5.164	1.192

4.7 Evaluation of PLS-SEM Results

In terms of the sequence and relationship among the constructs, the study has four exogenous latent variables which include: perceived service quality (PSQ), perceived

value (PV), sales promotion (SP), perceived CSR (PCSR), two mediating variables: customer satisfaction (CS) and customer trust (CT), one moderating variable: government regulations (GR) and one dependent variable (endogenous variable): customer loyalty (CL).

Since this study has both first-order reflective and second-order formative constructs, the two-stage approach (also known as sequential latent variable score method) is used to check the impact of second-order constructs in the model via smart PLS SEM Version 3.2.7 (Becker et al., 2012; Ringle et al., 2012; Wetzels et al., 2009).

4.7.1 Assessment of Reflective Measurement Model (Stage 1)

The reflective measurement model (outer model) is examined (in stage one), using Smart PLS 3.2.7 algorithm. As suggested by Hair et al. (2016) assessment of reflective measurement model includes: (1) outer loadings to analyse individual indicator reliability, (2) composite reliability to evaluate internal consistency, (3) average variance extracted (AVE) to evaluate convergent validity and (4) Fornell-Larcker criterion to assess discriminant validity (Fornell & Larcker, 1981) (5) Multicollinearity assessment (VIF).

Table 4.7 outlined the algorithm output results for the first order reflective constructs which are tangibles (4 indicators), reliability (5 indicators), responsiveness (4 indicators), assurance (4 indicators), empathy (5 indicators), perceived value (4 indicators), monetary sales promotion (4 indicators), non-monetary sales promotion (4 indicators), perceived corporate social responsibility (5 indicators), customer

satisfaction (3 indicators), customer trust (5 indicators) and customer loyalty (5 indicators).

The results reveal that factor loadings for all the indicators are well above the minimum threshold of 0.50 (Hair et al., 2016) except CT1 and CT3. Since these two items from customer trust scale have factor loadings lower than the threshold value of .50, they are deleted for further analysis. These results for customer trust scale are similar to the studies of Sledgianowski and Kulviwat (2009) and Moreira and Silva (2015) in other service settings. The factor loadings reported in table 4.7 for all the indicators showed that individual indicator reliability has been achieved.

Table 4. 7
Reflective Constructs' Factor Analysis (Outer Loadings)

Constructs	Items	Statement	Loadings
Tan	Tan1	My cellular service provider has modern equipment and technology.	0.835
	Tan2	My cellular service provider's physical facilities are visually appealing.	0.824
	Tan3	My cellular service provider's staff well dresses and appear neat.	0.865
	Tan4	Materials associated with the services (e.g. pamphlets for latest offers/bundles and tariffs) are visually appealing at service centres of my cellular service provider.	0.850
Rel	Rel1	When my cellular service provider promises to do something by a certain time, it does do.	0.823
	Rel2	When I have a problem, my cellular service provider shows sincere interest in solving it.	0.855
	Rel3	My cellular service provider performs the service right at the first time.	0.879
	Rel4	My cellular service provider provides its services at the time it promises to do so.	0.896
	Rel5	My cellular service provider always keeps the error-free record of billing.	0.872
Resp	Resp1	The staff of my cellular service provider tells me exactly when services will be performed	0.883
	Resp2	The staff of my cellular service provider give me prompt services.	0.902
	Resp3	The staff of my cellular service provider are always ready to help me.	0.844
	Resp4	The staff of my cellular service provider are never too busy to respond to my requests.	0.887
As	As1	The behaviour of staff of my cellular service provider instils confidence in customers.	0.869

Constructs	Items	Statement	Loadings
Emp	As2	I feel safe in doing transactions with my cellular service provider.	0.823
	As3	The staff of my cellular service provider are consistently courteous with me	0.813
	As4	The staff of my cellular service provider have adequate skills and knowledge to resolve customer's problems.	0.852
	Emp1	The staff of my cellular service gives me individual attention.	0.828
	Emp2	My cellular service provider's service centres have operating hours convenient for all its customers.	0.861
	Emp3	My cellular service has the staff who give me personal attention.	0.874
	Emp4	The staff of my cellular service provider has my best interests at heart	0.812
	Emp5	The staff of my cellular service provider understand my specific needs.	0.852
PV	PV1	The services offered by my cellular service provider are worthy of the purchase I made, compared to competitors.	0.880
	PV2	My cellular service provider charges me fairly for similar products and services offered by competitors.	0.872
	PV3	Compared to competitors, my cellular service provider offers me more free services.	0.850
	PV4	Compared to what I pay to what I get, the services offered by my cellular service provider are value for money compared to competitors.	0.847
SPM	SPM1	My cellular service provider frequently offers monetary/ cash rewards.	0.884
	SPM2	My cellular service provider frequently offers lucky draws to win cash, motorbike, car or gold etc.	0.907
	SPM3	My cellular service provider frequently offers price discounts.	0.878
	SPM4	My cellular service provider offers price discounts more frequently than competitors.	0.764
SPN	SPN1	My cellular service provider frequently offers free minutes.	0.716
	SPN2	My cellular service provider frequently offers free SMS bundles.	0.704
	SPN3	My cellular service provider frequently offers free internet bundles.	0.853
	SPN4	My cellular service provider offers free minutes, SMS and internet bundles more frequently than competitors.	0.863
PCSR	PCSR1	My cellular service provider helps to solve social problems.	0.862
	PCSR2	My cellular service provider has a strong sense of corporate social responsibility.	0.914
	PCSR3	My cellular service provider makes adequate contributions for the well-being of the local community.	0.910
	PCSR4	My cellular service provider allocates some of its resources to philanthropic activities.	0.898
	PCSR5	My cellular service provider plays a role in the society that goes beyond the mere generation of profits.	0.893
CS	CS1	The cellular services given by my cellular service provider are satisfactory.	0.913
	CS2	I feel good about my decision to choose my current cellular service provider.	0.939
	CS3	Overall I am happy with my current cellular service provider.	0.920
CT	CT1	My cellular service provider is very honest.	Deleted

Constructs	Items	Statement	Loadings
CL	CT2	My cellular service provider is very responsible.	0.894
	CT3	My cellular service provider is always professional.	Deleted
	CT4	My cellular service provider acts with good intentions.	0.937
	CT5	My cellular service provider can be trusted at all times.	0.922
	CL1	I am a loyal customer of my cellular service provider.	0.845
	CL2	I will buy more services of my cellular service provider in next few years.	0.897
	CL3	I consider my current cellular service provider my first choice.	0.907
	CL4	I have said positive things about my cellular service provider to my family and friends.	0.890
	CL5	I have recommended my cellular services provider to someone who sought my advice.	0.834

Furthermore, the composite reliability values in this study range from 0.866 to 0.953, indicating the reliability of the reflective measurement model as shown in table 4.8 (Hair et al., 2016; Henseler et al., 2009).

Table 4. 8
Reflective Constructs' Reliability and Convergent Validity

Constructs	Cronbach's Alpha	CR	AVE
Tan	0.865	0.908	0.712
Rel	0.916	0.937	0.749
Resp	0.902	0.932	0.773
As	0.860	0.905	0.705
Emp	0.900	0.926	0.715
PV	0.885	0.921	0.744
SPM	0.882	0.919	0.740
SPN	0.803	0.866	0.620
PCSR	0.938	0.953	0.802
CS	0.914	0.946	0.854
CT	0.906	0.941	0.842
CL	0.923	0.942	0.766

Note: CR=Composite Reliability, AVE=Average Variance Extracted.

Additionally, convergent validity is assessed by examining AVE values. The results in table 4.8, show that AVE values range from 0.620 to 0.854, hence exceeds the threshold

value of 0.50 (Hair et al., 2016; Henseler et al., 2009). So it can be concluded that convergent validity is established for all the reflective constructs under study.

Table 4. 9

Fornell-Larcker Criterion for Assessment of Discriminant Validity of Reflective Constructs

	As	CL	CS	CT	Emp	PCSR	PV	Rel	Resp	SPM	SPN	Tan
As	0.840											
CL	0.724	0.875										
CS	0.688	0.804	0.924									
CT	0.725	0.804	0.831	0.918								
Emp	0.836	0.744	0.697	0.766	0.846							
PCSR	0.546	0.645	0.729	0.713	0.576	0.896						
PV	0.768	0.754	0.747	0.765	0.779	0.685	0.862					
Rel	0.759	0.762	0.755	0.751	0.775	0.625	0.786	0.865				
Resp	0.767	0.766	0.770	0.776	0.777	0.621	0.802	0.839	0.879			
SPM	0.592	0.643	0.639	0.616	0.627	0.730	0.728	0.643	0.617	0.860		
SPN	0.594	0.617	0.703	0.662	0.567	0.774	0.656	0.599	0.611	0.776	0.787	
Tan	0.710	0.638	0.613	0.643	0.742	0.484	0.620	0.736	0.696	0.496	0.497	0.844

Note: The bold values represent the square root of Average Variance Extracted (AVE).

Table 4. 10

Multicollinearity Assessment of Reflective Constructs

Reflective Constructs	CS	CT	CL
Tan	2.728	2.728	2.729
Rel	4.625	4.752	4.753
Resp	4.540	4.747	4.803
As	4.230	4.235	4.238
Emp	4.703	4.716	4.987
PV	4.596	4.634	4.676
SPM	3.408	3.458	3.521
SPN	3.481	3.648	3.659
PCSR	3.078	3.336	3.493
CS		3.730	4.386
CT			4.654

Discriminant validity is assessed using Fornell-Larcker criterion (1981) (Hair et al., 2013). Table 4.9 shows the results of Fornell-Larcker Criterion (1981) where the square

root of AVE values in bold font is greater than its highest construct's correlation with any other constructs. Thus, it is concluded that discriminant validity has been established for the reflective constructs under study (Hair et al., 2016).

Finally, multicollinearity is assessed via Variance Inflation Factor (VIF) with the thresholds of more than 0.1 and less than 10 respectively (Hair, Sarstedt, Ringle, & Mena, 2012; Kline, 2015; Mooi, Sarstedt, & Mooi, 2018; Petter, Straub, & Rai, 2007). The results in table 4.10 show that the VIF values (extracted from PLS algorithm) for tangibles, reliability, responsiveness, assurance, empathy, perceived value, monetary sales promotion, non-monetary sales promotion, perceived corporate social responsibility, customer satisfaction, customer trust and customer loyalty, are clearly below the threshold of 10 (Kline, 2015; Mooi et al., 2018; Petter et al., 2007).

Hence, the above discussion conclude that first order reflective constructs: tangibles, reliability, responsiveness, assurance, empathy, perceived value, monetary sales promotion, non-monetary sales promotion, perceived corporate social responsibility, customer satisfaction, customer trust and customer loyalty, have fulfilled the measurement model evaluation criterion including internal consistency, convergent validity, discriminant validity and multicollinearity assessment. Furthermore, all the constructs have the sufficient number of indicators per construct to conduct the further analysis (Hair et al., 2016).

The reflective measurement model algorithm result output (Stage 1) is given in Appendix F. Now the next step is the evaluation of formative measurement model before proceeding for structural model evaluation.

4.7.2 Assessment of Formative Measurement Model (Stage 2)

As already explained this study has three formative constructs, two of which are first order reflective second-order formative constructs: perceived service quality (PSQ), sales promotion (SP) and one first-order formative construct: government regulations (GR). Since formative measurement model evaluation criteria is different from reflective measurement model, so this section address the measurement model evaluation of formative constructs only.

The steps involved the assessment of the formative measurement model includes convergent validity, multi-collinearity assessment and significance of outer weights after bootstrapping.

Convergent validity is assessed with the help of redundancy analysis. The results of the redundancy analysis are given for each of the formative constructs in table 4.11. The results revealed that the path coefficients of all the formative latent constructs (PSQ, SP, and GR) have achieved the minimum threshold of .50 in the redundancy analysis. So all the formative constructs under study have established the convergent validity. Furthermore, redundancy analysis result outputs for each formative construct are given in Appendix F.

Table 4. 11
Convergent Validity of Formative Measurement Model

Construct	Global Item	Path Coefficient
PSQ	GPSQ	0.744
SP	GSP	0.693
GR	GGR	0.857

Note: GPSQ: Global service quality indicator, GSP: Global sales promotion indicator, GGR: Global government regulations indicator

The second step for formative measurement model evaluation is conducting multicollinearity assessment through variance inflation factor (VIF). The results given in table 4.12 shows that VIF values for PSQ (Tan, Rel, Resp, As, Emp), SP (SPM and SPN) and GR (GR1, GR2, GR3, GR4) are below the threshold of 10, indicating no collinearity (Hair et al., 2012; Kline, 2015; Petter et al., 2007).

Now the last step in assessing the formative measurement model is testing the nomological validity of the outer weights and their significance after running bootstrapping procedure in Smart PLS version 3.2.7.

The results (table 4.12) for second-order formative construct PSQ showed that all the sub-dimensions: Rel, Resp, As and Emp are significant (P value $< .05$), except Tan, (P value $> .454$). However, according to Hair et al. (2016), when an indicator's/construct's outer weight is non-significant but its outer loading is high (i.e., above 0.50), the indicator should be interpreted as absolutely important so in that case, the indicator/construct is retained. Additionally, according to literature tangibles (Tan) is an important construct for measuring perceived service quality (Malik et al., 2011; Mokhtar et al., 2011; Parasuraman et al., 1985, 1988) and it has a higher outer loading (Tan=0.776). So it is retained to conduct the further analysis.

Similarly, both SPM and SPN have significant relationship with sales promotions (P value $< .01$). Furthermore, all the indicators of government regulations: GR1, GR2, GR3, GR4 are significantly relevant for measuring government regulations (P value $< .01$).

Table 4. 12

Formative Measurement Model Assessment (Multi-collinearity, Outer weights Significance)

Relationships	VIF	Outer Loading	Outer Weights	SD	T Value	P Value
Tan→PSQ	2.658	0.776	-0.007	0.056	0.117	0.454NS
Rel→ PSQ	4.256	0.930	0.300	0.071	4.198	0.000**
Resp→ PSQ	4.081	0.947	0.400	0.067	5.936	0.000**
As→ PSQ	3.916	0.876	0.131	0.068	1.926	0.027*
Emp→PSQ	4.361	0.905	0.256	0.070	3.644	0.000**
SPM→SP	2.516	0.919	0.434	0.078	5.546	0.000**
SPN→SP	2.516	0.962	0.625	0.074	8.495	0.000**
GR1→GR	1.595	0.757	0.261	0.056	4.629	0.000**
GR2→GR	3.629	0.904	0.240	0.077	3.106	0.001**
GR3→GR	4.165	0.930	0.361	0.080	4.486	0.000**
GR4→GR	3.315	0.902	0.277	0.077	3.589	0.000**

Note: NS: Not Significant, **:p<0.01; *:p<0.05 (1 tail test with 5000 bootstrapping).

In addition, the bootstrapping result output for assessment of formative measurement model (Stage 2) is given in Appendix F.

4.7.3 Assessment of Structural Measurement Model

As mentioned earlier, once the measurement model (outer model) is examined and the reliability and validity of the model are established, the next step is to evaluate the inner model (structural model) results. This involves assessment of the inner model's predictive abilities and the relationships between the constructs. Following sections describe direct paths, mediation analysis, and moderation analysis in detail.

4.7.3.1 Direct Relationships

4.7.3.1.1 Direct Determinants of Customer Loyalty

The results state that perceived service quality has a significant positive impact on customer loyalty ($\beta=0.303$, $t=3.882$, $p<0.01$), therefore H1 is supported. However, perceived value has an insignificant impact on customer loyalty ($\beta=0.077$, $t=1.103$, $p>0.05$), hence H2 is not supported. Similarly, sales promotion has an insignificant

relationship with customer loyalty ($\beta=0.042$, $t=0.852$, $p>0.05$) hence H3 is not supported. Subsequently, perceived corporate social responsibility also has an insignificant impact on customer loyalty ($\beta=-0.025$, $t=0.491$, $p>0.05$) so H4 is not supported. Additionally, customer satisfaction has a significant positive impact on customer loyalty ($\beta=0.283$, $t=4.881$, $p<0.01$) hence H5 is supported. Similarly, customer trust has a significant positive impact on customer loyalty ($\beta=0.223$, $t=3.314$, $p<0.01$), so H6 is supported. The results for the direct determinants of customer loyalty are given in table 4.13.

Table 4. 13
Direct Determinants of Customer Loyalty

Hypothesis	Path	β	Std Error	T- Value	P- Value	Significance Level
H1	PSQ→CL	0.303	0.078	3.882	0.000	Sig (Positive) **
H2	PV→CL	0.077	0.070	1.103	0.135	Not Sig
H3	SP→CL	0.042	0.049	0.852	0.197	Not Sig
H4	PCSR→CL	-0.025	0.051	0.491	0.312	Not Sig
H5	CS→CL	0.283	0.058	4.881	0.000	Sig (Positive) **
H6	CT→CL	0.223	0.067	3.314	0.000	Sig (Positive) **

Note: **: $p<0.01$; *: $p<0.05$ for a significance level of 1% and 5% respectively. Bootstrapping with 5,000 subsamples (1 tail test), Sig: Significant.

4.7.3.1.2 Direct Determinants of Customer Satisfaction

Perceived service quality has a significant positive impact on customer satisfaction ($\beta=0.498$, $t=8.478$, $p<0.01$) hence H7 is supported. However, the perceived value does not impact customer satisfaction significantly ($\beta=0.049$, $t=0.798$, $p>0.05$) hence H8 is not supported.

Table 4. 14
Direct Determinants of Customer Satisfaction

Hypothesis	Path	β	Std Error	T- Value	P- Value	Significance Level
H7	PSQ→CS	0.498	0.059	8.478	0.000	Sig (Positive) **
H8	PV→CS	0.049	0.061	0.798	0.212	Not Sig
H9	SP→CS	0.106	0.057	1.869	0.031	Sig (Positive) *
H10	PCSR→CS	0.287	0.055	5.234	0.000	Sig (Positive) **

Note: **:p<0.01; *:p<0.05 for a significance level of 1% and 5% respectively. Bootstrapping with 5,000 subsamples (1 tail test), Sig: Significant.

Furthermore, sales promotion is a significant predictor of customer satisfaction ($\beta=0.106$, $t=1.869$, $p<0.05$) thus H9 is supported. Similarly, perceived corporate social responsibility has a significant positive impact on customer satisfaction ($\beta=0.287$, $t=5.234$, $p<0.01$) therefore H10 is supported. The results for the direct determinants of customer satisfaction are given in table 4.14.

4.7.3.1.3 Direct Determinants of Customer Trust

Perceived service quality has a significant positive impact on customer trust ($\beta=0.370$, $t=6.575$, $p<0.01$) hence H11 is supported. However, perceived value is not a significant determinant of customer trust ($\beta=0.077$, $t=1.5911223$, $p>0.05$) hence H12 is not supported. Similarly, sales promotion has no significant impact on customer trust ($\beta=-0.050$, $t=1.065$, $p>0.05$), therefore H13 is not supported. However, perceived corporate social responsibility has a significant positive impact on customer trust ($\beta=0.181$, $t=3.656$, $p<0.01$) and customer satisfaction also has a significant positive impact on customer trust ($\beta=0.381$, $t=7.653$, $p<0.01$), consequently, H14 and H15 are supported. The results for the direct determinants of customer trust are given in table 4.15.

Table 4. 15
Direct Determinants of Customer Trust

Hypothesis	Path	β	Std Error	T- Value	P- Value	Significance Level
H11	PSQ→CT	0.370	0.056	6.575	0.000	Sig (Positive) **
H12	PV→CT	0.077	0.048	1.591	0.056	Not Sig
H13	SP→CT	-0.050	0.047	1.065	0.143	Not Sig
H14	PCSR→CT	0.181	0.049	3.656	0.000	Sig (Positive) **
H15	CS→CT	0.381	0.050	7.653	0.000	Sig (Positive) **

Note: **:p<0.01; *:p<0.05 for a significance level of 1% and 5% respectively. Bootstrapping with 5,000 subsamples (1 tail test), Sig: Significant.

4.7.3.2 The Coefficient of Determination (R^2)

R^2 values for all the endogenous variables (customer satisfaction, customer trust, and customer loyalty) are given in table 4.16. The R^2 value for customer satisfaction shows that all the four exogenous variables (PSQ, PV, SP, and PCSR) explain 71.9% variance in customer satisfaction. Similarly, all the five exogenous variables (PSQ, PV, SP, PCSR, and CS) explain 77.5% variance in customer trust. Additionally, all the seven exogenous variables (PSQ, PV, SP, PCSR, CS, CT, and GR) explain 74.7% variance in customer loyalty. So it is concluded that the model has substantial predictive validity.

Table 4. 16
Coefficient of Determination (R^2)

Endogenous Variable	R^2
CS	0.719
CT	0.775
CL	0.747

4.7.3.3 The Assessment of Effect Size (f^2)

The table 4.17 shows the effect size for each hypothesized direct relationship. According to the results, most of the exogenous variables have small effect size for their respective endogenous variables.

Table 4. 17
The Assessment of Effect Size (f^2)

Relationship	Effect Size (f^2)	Explanation
PSQ→CL	0.058	Small
PV→CL	0.005	< 0.02
SP→CL	0.002	< 0.02
PCSR→CL	0.001	< 0.02
CS→CL	0.075	Small
CT→CL	0.030	Small
PSQ→CS	0.228	Medium
PV→CS	0.002	<0.02
SP→CS	0.012	< 0.02
PCSR→CS	0.098	Small
PSQ→CT	0.128	Medium
PV→CT	0.006	< 0.02
SP→CT	0.003	< 0.02
PCSR→CT	0.044	Small
CS→CT	0.182	Medium

4.7.3.4 The Assessment of Predictive Relevance (Q^2)

Predictive relevance is used to assess the structural model's relevance in predicting the phenomenon under study. The results in Table 4.18 shows that the Q^2 values for all the endogenous variables are greater than zero (CS =0.697, CT= 0.715 and CL= 0.752) suggesting a substantial predictive relevance of the model (Hair et al., 2016).

Table 4. 18
Assessment of Predictive Relevance (Q^2)

Exogenous Variables	Endogenous Variable	Q^2
PSQ	CS	0.697
PV		
SP		
PCSR		
PSQ	CT	0.752
PV		
SP		
PCSR		
CS		

Exogenous Variables	Endogenous Variable	Q ²
PSQ	CL	0.715
PV		
SP		
PCSR		
CS		
CT		

PLS-SEM Bootstrapping t-value results are given in figure 4.2 for the assessment of structural measurement model.

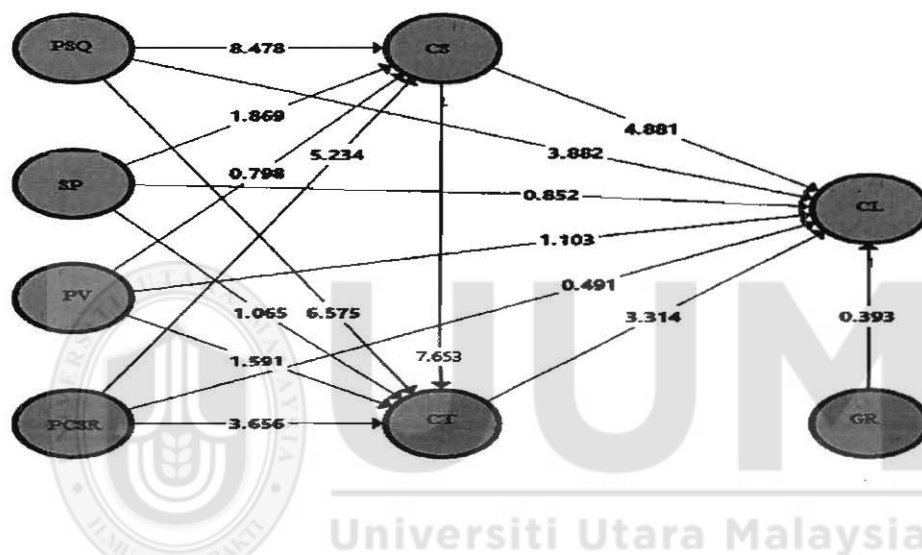


Figure 4. 2
Structural Measurement Model PLS-SEM Bootstrapping Results (T- Values)

4.7.3.5 Mediation Test

Mediation analysis is conducted for customer satisfaction and customer trust. The mediation results are given in the following section.

4.7.3.5.1 Mediating Effect of Customer Satisfaction

Results in table 4.19 suggest that customer satisfaction is a significant mediator between perceived service quality and customer loyalty ($\beta = 0.141$, $t = 4.436$), hence H16a is supported. However, customer satisfaction does not mediate the relationship between perceived value and customer loyalty ($\beta = .014$, $t = .762$) so H16b is not supported.

Additionally, customer satisfaction does not mediate the relationship between sales promotion and customer loyalty ($\beta = 0.030$, $t = 1.781$), therefore H16c is not supported. However, customer satisfaction mediates the relationship between perceived corporate social responsibility and customer loyalty ($\beta = 0.024$, $t = 2.711$), hence, H16d is supported.

Table 4. 19
Mediating Effect of Customer Satisfaction

Hypothesis	Path	β	Std Error	T Value	2.5%	97.5%	Significance Level
H16a	PSQ→CS→CL	0.141	0.032	4.436	0.085	0.210	Sig (Positive)**
H16b	PV→CS→CL	0.014	0.018	0.762	-0.015	0.057	Not Sig
H16c	SP→CS→CL	0.030	0.017	1.781	0.001	0.068	Not Sig
H16d	PCSR→CS→CL	0.024	0.009	2.711	0.011	0.049	Sig (Positive)*

Note: **: $p < 0.01$; *: $p < 0.05$ for a significance level of 1% and 5% respectively. Bootstrapping with 5,000 subsamples (2 tail test), Sig: Significant.

4.7.3.5.2 Mediating Effect of Customer Trust

Mediation results in table 4.20 suggest that customer trust is a significant mediator between perceived service quality and customer loyalty ($\beta = 0.083$, $t = 2.976$) hence H17a is supported. However, customer trust does not mediate the relationship between perceived value and customer loyalty ($\beta = 0.017$, $t = 1.417$), therefore, H17b is not supported. Similarly, customer trust does not mediate the relationship between sales promotion and customer loyalty ($\beta = -0.011$, $t = 0.980$), suggesting that H17c is not supported. However, customer trust mediates the relationship between perceived corporate social responsibility and customer loyalty ($\beta = 0.109$, $t = 4.666$) therefore, H17d is supported.

Table 4. 20
Mediating Effect of Customer Trust

Hypothesis	Path	β	Std Error	T Value	2.5%	97.5 %	Significance Level
H17a	PSQ→CT→CL	0.083	0.028	2.976	0.037	0.148	Sig (Positive)*
H17b	PV→CT→CL	0.017	0.012	1.417	0.000	0.049	Not Sig
H17c	SP→CT→CL	-0.011	0.011	0.980	-0.042	0.005	Not Sig
H17d	PCSR→CT→CL	0.109	0.023	4.666	0.070	0.164	Sig (Positive)**

Note: **:p<0.01; *:p<0.05 for a significance level of 1% and 5% respectively. Bootstrapping with 5,000 subsamples (2 tail test), Sig: Significant.

4.7.3.6 Moderation Test

As suggested by results in table 4.20, the first interaction term PSQ*GR is not significant ($\beta=-0.096$, $t=1.163$, $p>0.05$), hence H18a is not supported. However, PV*GR is significant ($\beta=0.140$, $t=1.798$, $p<0.05$), hence H18b is supported with medium effect size as proposed by Kenny (2016). While, for H18c, it is clear that the interaction effect SP*GR is not significant ($\beta=0.091$, $t=1.605$, $p>0.05$), hence, H18c is not supported. In addition, the interaction effect PCSR*GR is significant ($\beta= -0.184$, $t= 3.015$, $p<0.01$), hence, H18d is supported with large effect size. Conversely, H18e and H18f are not supported as the interaction effects CS*GR ($\beta= -0.014$, $t= 0.235$, $p>0.05$) and CT*GR ($\beta= 0.086$, $t= 0.096$, $p>0.05$) are not significant respectively.

Additionally, the results show that model's coefficient of determination (R^2) for customer loyalty improves from $R^2 = 0.747$ (model 1= whereby government regulations construct is only included as independent variable, table 4.16 (section: 4.7.3.2), to $R^2 = 0.757$ (model 2= whereby government regulations is included as independent variable and its interaction effects are also included) due to addition of interaction terms.

Table 4. 21
Results of Moderation Test

Hypothesis /Path	(β)	SD	T-Value	P-Value	Significance Level
H18a PSQ*GR→CL	-0.096	0.083	1.163	0.123	Not Sig
H18b PV*GR→CL	0.140	0.078	1.798	0.036	Sig(Positive)*
H18c SP*GR→CL	0.091	0.056	1.605	0.054	Not Sig
H18d PCSR*GR→CL	-0.184	0.061	3.015	0.001	Sig(Negative)**
H18e CS*GR→CL	-0.014	0.061	0.235	0.407	Not Sig
H18f CT*GR→CL	0.086	0.066	1.302	0.096	Not Sig
R2	0.757				

Note: **:p<0.01; *:p<0.05 for a significance level of 1% and 5% respectively. Bootstrapping with 5,000 subsamples (1 tail test), Sig: Significant. (P)= Positive.

The PLS-SEM bootstrapping t-value results for moderating relationships are given figure 4.3. Furthermore, the simple slop analysis for each significant relationship is also given in Appendix F.

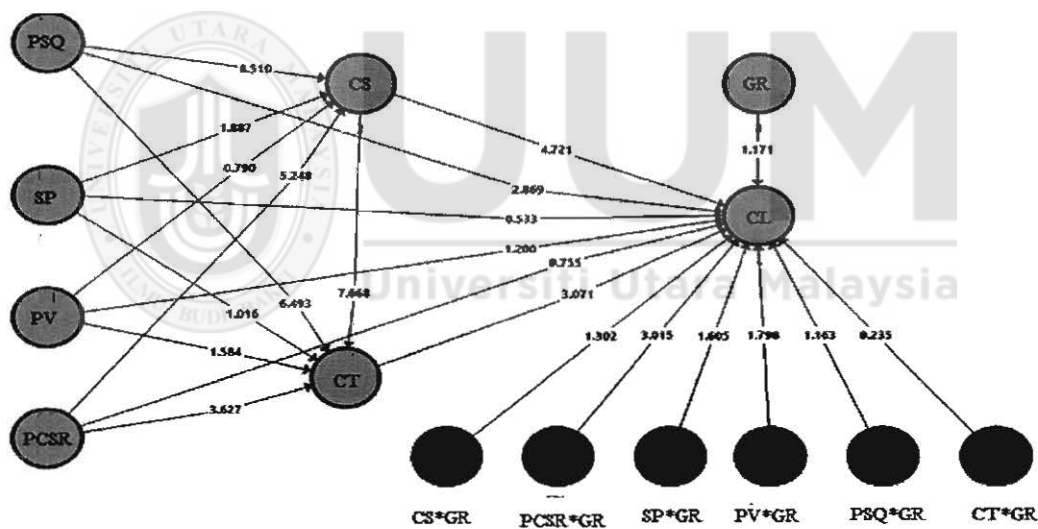


Figure 4. 3
Moderation Analysis PLS-SEM Bootstrapping Results (T-Values)

4.7.3.7 Summary of Results

This section displays the summary of all the hypotheses proposed in this study.

Table 4. 22
Summary of Findings

Hypotheses	Statement	Significance Level
H1	Perceived service quality is positively related to customer loyalty.	Sig (Positive)
H2	Perceived value is positively related to customer loyalty.	Not Sig
H3	Sales promotion is positively related to customer loyalty.	Not Sig
H4	Perceived corporate social responsibility is positively related to customer loyalty.	Not Sig
H5	Customer satisfaction is positively related to customer loyalty.	Sig (Positive)
H6	Customer trust is positively related to customer loyalty.	Sig (Positive)
H7	Perceived service quality is positively related to customer satisfaction.	Sig (Positive)
H8	Perceived value is positively related to customer satisfaction.	Not Sig
H9	Sales promotion is positively related to customer satisfaction	Sig (Positive)
H10	Perceived corporate social responsibility is positively related to customer satisfaction.	Sig (Positive)
H11	Perceived service quality is positively related to customer trust.	Sig (Positive)
H12	Perceived value is positively related to customer trust.	Not Sig
H13	Sales promotion is positively related to customer trust.	Not Sig
H14	Perceived corporate social responsibility is positively related to customer trust.	Sig (Positive)
H15	Customer satisfaction is positively related to customer trust.	Sig (Positive)
H16a	Customer satisfaction mediates the relationship between perceived service quality and customer loyalty.	Sig (Positive)
H16b	Customer satisfaction mediates the relationship between perceived value and customer loyalty.	Not Sig
H16c	Customer satisfaction mediates the relationship between sales promotion and customer loyalty.	Not Sig
H16d	Customer satisfaction mediates the relationship between perceived corporate social responsibility and customer loyalty.	Sig (Positive)
H17a	Customer trust mediates the relationship between perceived service quality and customer loyalty.	Sig (Positive)
H17b	Customer trust mediates the relationship between perceived value and customer loyalty.	Not Sig
H17c	Customer trust mediates the relationship between sales promotion and customer loyalty.	Not Sig
H17d	Customer trust mediates the relationship between perceived corporate social responsibility and customer loyalty.	Sig (Positive)
H18a	Government regulations moderate the relationship between perceived service quality and customer loyalty.	Not Sig
H18b	Government regulations moderate the relationship between perceived value and customer loyalty.	Sig (Positive)
H18c	Government regulations moderate the relationship between sales promotions and customer loyalty.	Not Sig

Hypotheses	Statement	Significance Level
H18d	Government regulations moderate the relationship between perceived CSR and customer loyalty.	Sig (Negative)
H18e	Government regulations moderate the relationship between customer satisfaction and customer loyalty.	Not Sig
H18f	Government regulations moderate the relationship between customer trust and customer loyalty.	Not Sig

Note: Sig = Significant, Not Sig = Not Significant

4.8 Chapter Summary

This chapter presents the statistical analysis of quantitative data collected through a questionnaire distributed in four provinces of Pakistan. The chapter presents the results of the response rate test and data screening. It further reported the demographic profile and characteristics of cellular service consumers of Pakistan. Then, descriptive analysis results are presented, followed by the measurement model as well as the structural model which are assessed using the Smart PLS 3.2.7. Subsequently, results from hypotheses testing based on the evaluation of the inner model are reported. Lastly, summary of the results is reported.

Universiti Utara Malaysia

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Chapter Overview

This chapter focuses on the discussion of the research findings based on the research objectives, research questions, hypotheses and literature review. Additionally, the chapter provides the theoretical, practical and methodological contributions and implications of the findings of this study. The chapter further highlights the research limitations and offers direction for future research. Finally, the chapter presents the conclusion of the study.

5.2 Recapitulation of Study Objectives

This section presents the recapitulation of the objectives of this study. The main objectives of this study are to explore the direct determinants of customer loyalty, customer satisfaction and customer trust in the cellular service sector of Pakistan, the mediating effect of customer satisfaction, and customer trust and the moderating effect of government regulations. These objectives are given as follows:

1. To study perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction, and customer trust as direct determinants of customer loyalty.
2. To study perceived service quality, perceived value, sales promotion, and perceived corporate social responsibility as direct determinants of customer satisfaction.

3. To study perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer satisfaction as direct determinants of customer trust.
4. To study the mediating effect of customer satisfaction between the relationships of perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer loyalty.
5. To study the mediating effect of customer trust between the relationships of perceived service quality, perceived value, sales promotion, perceived corporate social responsibility and customer loyalty.
6. To study the moderating effect of government regulations between customer loyalty and its direct determinants (perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction and customer trust).

Based on the objectives, twenty-nine hypotheses are proposed and statistically tested with Smart PLS 3.2.7. The empirical results provide support for fifteen hypotheses and do not support rest of the fourteen hypotheses.

5.3 Objective 1: Direct Determinants of Customer Loyalty

This section examines the direct determinants of customer loyalty which are perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction and customer trust. Only three variables are found to be significant determinants of customer loyalty which are perceived service quality, customer satisfaction and customer trust. However, perceived value, sales promotion and perceived corporate social responsibility do not have a significant relationship with customer loyalty.

The next section discusses the significant determinants of customer loyalty.

5.3.1 Perceived Service Quality and Customer Loyalty

The first positive direct significant determinant of customer loyalty is perceived service quality. This implies that the higher the service quality the higher the customer loyalty will be. It elaborates that those cellular service providers which focus on tangibles of their service centres, offer reliable services, have responsive employees who assure to perform their tasks properly and show empathy to their cellular consumers, they have higher chances of maintaining loyal consumers. Another reason for the importance of service quality in the cellular sector of Pakistan is highlighted by Jahanzeb et al. (2011) that cellular sector of Pakistan is facing fierce competition and price reduction is an imitable strategy which is losing significances for developing loyalty among the consumers in Pakistan. Since this is the era of globalization and consumers are well aware of their rights, so better service quality leads towards customer loyalty. Moreover, Pakistan telecommunication authority conducts quality of services survey every year in major cities of Pakistan to assure the provision of quality services to the cellular consumers (Pakistan Telecommunication Authority, 2016b). This implies that maintaining service quality is a very important element for the cellular sector of Pakistan. Hence it can be inferred that consumer's perception of being the receipt of better service quality leads toward higher chances of being loyal to the cellular service providers (Nasir et al., 2014).

A string of Pakistani researchers also stressed that perceived service quality is an important direct positive determinant of customer loyalty in the cellular sector (Anjum et al., 2013; Khokhar et al., 2011; Khurshid, 2013; Saleem, Zahra, Ahmad, & Ismail,

2016). Moreover, previous studies in cellular settings other than Pakistan also stressed the perceived service quality is an important determinant of customer loyalty (Alnsour et al., 2014; Amin et al., 2012; Lee, 2013; Morgan & Govender, 2017; Roy, Butaney, et al., 2014). Similarly, studies other than cellular sector for example Makanyeza et al. (2017) in the banking sector, Lai (2015) in the restaurant industry, Izogo and Ogba (2015) in automobile industry also found perceived service quality a key direct determinant of customer loyalty. This argument is also coherent with Oliver (1999) who endorsed that consumers look for functional characteristics of the services including service quality for developing preferences and loyalty towards a seller.

5.3.2 Customer Satisfaction and Customer Loyalty

Customer satisfaction is also found to be a direct positive determinant of customer loyalty. It implies that satisfied customers are more likely to be loyal to the cellular service provider and its services. It further elaborates that consumers who are happy and feel good about their decision to choose their cellular service providers are more likely to be loyal to their cellular service provider. This finding shows that if the cellular consumers are satisfied, they will buy more services from their cellular service provider and will positively recommend their cellular service provider to family and friends. Moreover, according to Oliver (1999) four-stage loyalty model, customer satisfaction is an important determinant of customer loyalty. This finding supports the idea, that if cellular service providers of Pakistan are concerned to keep their consumers loyal, they must pay specific attention to directing their marketing activities towards increasing customer satisfaction.

Furthermore, this empirical result is mirrored with the previous researches in the cellular sector of Pakistan which describes the customer satisfaction as a significant positive determinant of loyalty in the cellular sector (Ahmad et al., 2015; Nasir et al., 2014; Raza & Rehman, 2012; Sindhu & Arif, 2017). Similarly, various studies in cellular sectors other than Pakistan also stressed the significant positive impact of customer satisfaction on customer loyalty (Adeleke & Suraju, 2012; Ahmad et al., 2015; Cho & Cho, 2017; Deng et al., 2010; George & Upadhyaya, 2015; Lee, 2013; Minarti & Segoro, 2014; Nasir et al., 2014; Oghojafor et al., 2014; Ortega et al., 2017). In addition, a handful of studies also highlighted the importance of customer satisfaction for developing customer loyalty in settings other than cellular sector, for example Makanyeza et al. (2017) as well as Barcelos et al. (2015) in banking sector, Kiran and Diljit (2017) in web-based library services, Lai (2015) and Haghighi et al. (2012) in restaurant industry, Matzler et al. (2015) in information communication technology, Bajs (2015) in tourism industry found customer satisfaction an important direct determinant of customer loyalty.

Keeping in view the importance of customer satisfaction, it is necessary for the cellular service providers in Pakistan to consider customer satisfaction the most important determinant of customer loyalty while designing the marketing strategies.

5.3.3 Customer Trust and Customer Loyalty

The empirical result of this study shows that customer trust is a direct positive determinant of customer loyalty. It implies that the higher the consumer trust, the higher will be customer loyalty. It further describes that the consumers believe that their cellular service providers are responsible, acts with good intention and are trustworthy.

This trust in cellular service provider helps the consumers to buy more services from their cellular service providers. Customer trust also enhances the future preference for the cellular service providers. In addition, the customers who trust their cellular operators are more likely to recommend their cellular service provider to friends and relatives. So, in the context of Pakistan's cellular sector, once the consumers develop trust toward their cellular service providers, it is likely to enhance customer loyalty.

Additionally, Rasheed and Abadi (2014) and Nasir et al. (2014) suggest that customer loyalty is about maintaining the relationship and customer trust does have a strong influence on the relationship between the consumer and the cellular service provider. So, when deciding to end the relationship, the consumer will appraise all the underpinning costs incurred to switch to a new relationship including customer trust. Furthermore, according to Deng et al. (2010), satisfied customers may have the tendency to switch to another service provider if the trust is low and may stay if the trust is high. This concept is also supported by Oliver (1999) four-stage loyalty model where consumer engages in positive attitude toward the service provider in the form of developing trust and proceed to stay loyal in the form of action loyalty. Based on these findings, customer trust is highlighted as a key determinant for keeping the consumers loyal, hence it is very important for cellular service providers of Pakistan to impart trust towards the customer to win their loyalty.

The past studies also reflect the importance of customer trust as a significant determinant of customer loyalty in cellular sector of Pakistan (Ahmad et al., 2015; Amin et al., 2012; Anjum et al., 2013; Khokhar et al., 2011; Nasir et al., 2014; Raza & Rehman, 2012; Sindhu & Arif, 2017). In addition, few other studies in cellular sectors

other than Pakistan also stressed the importance of customer trust for generation of customer loyalty (Choi & La, 2013; Karjaluoto et al., 2012; Liu et al., 2011; Minarti & Segoro, 2014; Oghojafor et al., 2014; Pumim et al., 2017; Roy, Butaney, et al., 2014). Furthermore, past studies other than cellular sector, for example, Usman (2017) in hospital industry, Reuver et al. (2015) smart phone industry, Barcelos et al. (2015) in banking industry and Rasheed and Abadi (2014) in banking, insurance and cellular sector also revealed customer trust a key determinant of customer loyalty.

Since customer trust is very important for developing a long-term relationship with the consumers in the cellular service sector of Pakistan. Hence, to attain customer loyalty, the cellular service providers in Pakistan should plan marketing strategies keeping the customer trust as an essential objective to be achieved.

The following section discusses the insignificant determinants of customer loyalty.

5.3.4 Perceived Value and Customer Loyalty

According to the findings of this study, perceived value is not significantly related to customer loyalty. It indicates that perception of value does not impact the phenomenon of loyalty in the cellular sector of Pakistan. It may further establish that the consumers do not perceive any difference between the values offered by each cellular service provider in Pakistan. For example, all the Pakistani cellular service providers are offering “supercards” for the prepaid consumers, which have almost similar offerings, generating similar value for the consumers (Shadman, 2015). This similarity in value perception may cause the perceived value to be negligible to generate loyalty in Pakistan’s cellular sector.

Furthermore, researchers such as Morgan and Govender (2017) and Kaura (2012) argue that the relationship between perceived value and loyalty can be ambiguous due to value being a highly subjective phenomenon for the cellular consumers. It is not difficult to see that value proposition is different and highly subject for every cellular consumer in Pakistan where they seek different offerings for their specific needs and 'value' has a different meaning for them (Chattha et al., 2016).

This empirical result is also consistent with the previous studies conducted in cellular and non-cellular settings for example, Kassim et al. (2014) as well as Morgan and Govender (2017) in cellular sector, Kiran and Diljit (2017) in web-based library services, Usman (2017) in hospital industry, Lai (2015) in restaurant industry, Munhurrun et al. (2015) in tourism industry and Howat and Assaker (2013) in outdoor aquatic services revealed that perceived value is an insignificant determinant of customer loyalty.

5.3.5 Sales Promotion and Customer Loyalty

Sales promotion is found to be an insignificant determinant of customer loyalty. It indicates that sales promotion does not impact customer loyalty in the cellular service sector of Pakistan. This is because the cellular service consumers do not consider monetary and non-monetary sales promotion a sufficient reason to stay loyal to the cellular service providers of Pakistan. In fact in the context of cellular service sector of Pakistan, (where cellular service providers are investing on multiple monetary and non-monetary sales promotions) the consumers may have a higher chance to get attracted to the sales promotions for a short time period rather than generating loyalty for a particular cellular service provider in long run (Saeed, Nisar, et al., 2013).

This finding is also adjacent to the past studies of Asiamah et al. (2016) as well as Hossain and Suchy (2013) in cellular sector, Dubey (2014) in cosmetics industry, Gedenk and Neslin (2000) in retail industry, whereby sales promotion found to be an insignificant determinant of customer loyalty.

5.3.6 Perceived Corporate Social Responsibility and Customer Loyalty

Perceived CSR is not a significant predictor of customer loyalty. It indicates that perceived CSR does not directly influence cellular consumers of Pakistan to develop loyalty for cellular service providers. It means that cellular service providers' concern for solving social issues and participation in philanthropic activities do not directly translate into customer loyalty. It is because cellular consumers of Pakistan may assume that cellular companies are not successfully implementing the CSR policies in Pakistan (Sajjad & Eweje, 2014; Sarfraz, 2014). It is evident by the responses of the participants (section 4.5, characteristics of cellular service consumers, table 4.5) where almost 43.80% of the respondents portray that cellular service providers are not participating in any kind of CSR activities in Pakistan. Moreover, the participants perceived very low participation by cellular service providers in health (19.8%), disaster relief (12.4%) and preserving ecosystem (7%). This notion also gained government support in Pakistan where the government shows its concern for low participation of cellular sector for the wellbeing of society (Rahman, 2015). Keeping in consideration the results of the descriptive analysis which highlighted the insufficient participation of cellular service provider for CSR activities in Pakistan, it is very important for cellular service providers to include the CSR participation into their agenda while designing the marketing strategy.

These findings are similar to the past studies of Halim and Hermawan (2017), Chang and Yeh (2017), Camacho, Silva, and Florencio (2017), Barcelos et al. (2015), as well as Mandhachitara and Poolthong (2011) whereby perceived CSR found to be an insignificant determinant of customer loyalty.

5.4 Objective 2: Direct Determinants of Customer Satisfaction

This study proposed four direct positive determinants of customer satisfaction which are perceived service quality, perceived value, sales promotion and perceived corporate social responsibility. According to the results, perceived service quality, sales promotion and perceived CSR are found to be significant positive determinants of customer satisfaction. However, perceived value has an insignificant impact on customer satisfaction.

The direct significant positive determinants of customer satisfaction are discussed beneath.

5.4.1 Perceived Service Quality and Customer Satisfaction

The results show that perceived service quality is positively and significantly related to customer satisfaction. It suggests that consumers' perception toward being the recipient of better service quality enhance their satisfaction. It further suggests that as long as the cellular service providers in Pakistan have up to date tangible facilities to attend the cellular consumer's needs, have responsive and reliable employees who assure to perform their tasks with empathy, they will have high customer satisfaction.

Additionally, Rashid, Rehman, and Aslam (2016) demonstrated that when cellular consumers' perception regarding service quality is well achieved, the consumers are

more likely to be satisfied with the cellular service provider. So, it is very important for cellular service providers to please the customer through the best quality of services in the cellular service sector of Pakistan. It further suggests the cellular service providers to educate and train their cellular service staff to please and satisfy their consumers. For this training, the cellular service providers should bear in mind the elements of service quality which are being responsive and showing empathy to consumers.

This result is coherent with the findings of previous studies in cellular sector of Pakistan (Hafeez & Hasnu, 2010; Hassan et al., 2012; Nasir et al., 2014; Raza & Rehman, 2012) and non-Pakistan cellular (Pumim et al., 2017) and non cellular settings (Barcelos et al., 2015; Han & Hwang, 2015). Furthermore, this is consistent with Oliver (1999) where consumers evaluate service quality of the seller's offerings and entered into the second stage of loyalty (customer satisfaction).

5.4.2 Sales Promotion and Customer Satisfaction

Sales promotion is a positive and significant determinant of customer satisfaction. This finding reveals that the more the sales promotion the more will be customer satisfaction. It implies that when cellular consumers of Pakistan received monetary benefits (price discounts, participates in lucky draws etc.) and non-monetary benefits (free minutes, sms and internet bundles etc.) as short-term sales promotion offerings, they develop a sense of satisfaction for their cellular service providers (Baig et al., 2015).

To date, cellular services providers are offering numerous monetary sales promotions, for example, cash prize, cars etc. (Pro Pakistani, 2014) and non-monetary sales

promotion for example free minutes, free SMS and free internet bundles (Ullah, 2018) to satisfy and please their current and new cellular consumers.

This phenomenon is also coherent with Oliver's (1999) four stage loyalty model, where consumers engage in affective loyalty (customer satisfaction) after seeking benefits in the initial stage of loyalty called cognitive loyalty.

This result is also consistent with the findings of Ogbojafor et al. (2014) in cellular sector, Hilman and Hanaysha (2015) in automotive industry, Dutsenwai et al. (2015) in petrol station, Huang et al. (2014) in restaurant industry, Ubeja (2014) in shopping malls as well as Khan et al. (2012) in shopping malls.

So in the context of the cellular service sector of Pakistan, it is very important to focus on sales promotion offerings to develop satisfaction among cellular consumers. Furthermore, the sales promotions should be planned in such a way that customers feel happy and pleased when they utilize those sales promotions. By doing so, the marketer will be able to enhance the effectiveness of sales promotions offerings.

5.4.3 Perceived CSR and Customer Satisfaction

Perceived corporate social responsibility is positively and significantly related to customer satisfaction. It advocates that consumer perception about cellular service providers' corporate social responsibility participation triggers customer satisfaction. It also indicates that cellular service providers' participation in philanthropic activities, solving social issues and contribution toward society beyond the mere generation of profits, pleased the cellular customers (Islam et al., 2013).

Moreover, Oliver's (1999) four stage loyalty model also supports this finding, according to which customers do not develop loyalty at one instance directly (section 5.3.6, PCSR found to be an insignificant determinant of customer loyalty). In fact loyalty generated in stages, for example, when consumers receive some benefits (societal benefits) in the first stage of loyalty, they engage in the second stage of loyalty, called affective loyalty (customer satisfaction).

Since the corporate social responsibility is an important determinant of customer satisfaction, hence, this study provides an opportunity to the cellular service providers to focus on this emerging significant direct positive determinant of customer satisfaction by properly planning CSR strategies for the wellbeing of society. This will help the cellular service providers to satisfy the consumers in a more effective manner.

This result is adjacent to the previous studies conducted by Sindhu and Arif (2017), as well as Islam et al. (2013) in cellular sector, Chang and Yeh (2017) in bus services, Park et al. (2017) in retail industry, Pérez and Bosque (2017) as well as Barcelos et al. (2015) in banking sector on the impact of perceived CSR on customer satisfaction.

The discussion on direct insignificant determinants of customer satisfaction is given in the following section.

5.4.4 Perceived Value and Customer Satisfaction

According to the results of this study, perceived value is not a significant determinant of customer satisfaction. It indicates that perceived value does not play a significant role in developing satisfaction among cellular consumers in Pakistan.

One of the reasons for the insignificant impact of perceived value for customer satisfaction could be, the massive and complicated service plans and offerings/bundles by cellular service providers, which inculcate the feeling of not getting the distinctive value for utility of a particular cellular service (Atta, 2012; Pakistan Telecommunication Authority, 2012b). This low value perception dose does not please or satisfy the customers in the cellular service sector of Pakistan. In addition, the similarity of cellular offerings as explained earlier (section 5.3.4) can also result in an insignificant impact of perceived value on customer satisfaction.

The insignificant impact of perceived value on customer satisfaction is also noted by Ishaq et al. (2013) in medicine industry of Pakistan and Wallin Andreassen and Lindestad (1998) in the tourism industry of Norway in past literature.

5.5 Objective 3: Direct Determinants of Customer Trust

Five direct positive determinants of customer trust are proposed in this study which are perceived service quality, perceived value, sales promotion, perceived corporate social responsibility, customer satisfaction. The results show that perceived service quality, perceived corporate social responsibility and customer satisfaction are significant and positive determinants of customer trust. However, perceived value and sales promotion do not impact customer trust significantly.

The significant positive direct determinants of customer trust are discussed henceforth.

5.5.1 Perceived Service Quality and Customer Trust

The empirical results of this study show that perceived service quality is a positive and significant determinant of customer trust. It indicates that increase in quality of cellular

service in Pakistan leads toward the enhancement of customer trust. It also implies that when the cellular consumers believe that cellular service provider has well developed tangible equipment and set up to serve the customer in a responsive and reliable manner, his/her trust increased on the cellular service provider. Since cellular services are intangible and uncertainty is inevitable, so the perception of consistent and higher service quality helps to build customer trust on the cellular service provider to consume cellular services (Chang, Chen, & Lan, 2013). So, it is very important to make the tangibles (for example customer service centres) more visually appealing for cellular consumers to develop perception among consumers that the cellular operator is professional and reliable. Moreover, the cellular service providers should have responsive and reliable employees who are honest and understand the consumers. These quality oriented strategies will help to improve the trust among the cellular consumers in Pakistan.

Previous literature also suggests that perceived service quality is an important determinant of customer trust in cellular sector of Pakistan (Amin et al., 2012; Nasir et al., 2014; Rasheed & Abadi, 2014; Raza & Rehman, 2012). Similarly, past literature for the non-cellular sector, for example Usman (2017) in the hospital industry, Hayat (2017) as well as Barcelos et al. (2015) in the banking sector, Debei et al. (2015) in online services also support that perceived service quality is a key determinant of customer trust. This phenomenon is also endorsed by Oliver (1999) where consumers seek to evaluate the quality of sellers' offerings to engage in customer trust (third stage of loyalty).

5.5.2 Perceived CSR Customer Trust

The findings show that perceived corporate social responsibility is a positive and significant determinant of customer trust. It establishes that cellular service providers' participation in corporate social responsibility enhances customer trust. It further elaborates that cellular service providers' contribution to solving the social problems and working on the well-being of society indoctrinate trust in cellular consumers of Pakistan. Furthermore, Choi and La (2013) advocate that corporate social responsibility has a solemn impact on firm relationships with customers (Lagace et al. 1991) and positively influences consumers' attitudes including customer trust (Folkes & Kamins, 1999). So Pakistani cellular service providers should increase their participation in corporate social responsibility to win consumers' trust.

This finding is also supported by Oliver's (1999) four stage loyalty model, which suggests that at first stage of loyalty (cognitive loyalty) customers evaluate the benefits offered by seller including societal benefits (PCSR) to enter into subsequent stages of customer loyalty i.e. customer trust (conative loyalty).

Since this study highlighted that CSR is an important determinant of customer trust, so cellular marketers should properly plan CSR strategies and should increase their participation in CSR activities to improve consumers' trust.

Recently, Sindhu and Arif (2017) also found the significant positive impact of perceived corporate social responsibility on customer trust in cellular sector of Pakistan. In addition, Park et al. (2017) in retail industry, Halim and Hermawan (2017) in airline industry, Barcelos et al. (2015) in banking sector, Samuel and Chandra (2014) in

cosmetic industry, Swimberghe and Wooldridge (2014) in restaurant industry, Choi and La (2013) in service industry and Martínez and Bosque (2013) in hotel industry revealed that perceived corporate social responsibility is an important determinant of customer trust.

5.5.3 Customer Satisfaction and Customer Trust

Customer satisfaction is a positive and significant determinant of customer trust. It indicates that the more the customers are satisfied, the more trust they will develop on the cellular service providers. It also illustrates that when the cellular consumers in Pakistan felt good and happy about choosing a particular service provider, they also trust their cellular service provider. Additionally, according to Oliver's four stage loyalty model (1999), which states that consumer engages in trust (third stage) after developing satisfaction (second stage) also supports this proposition. In other words, when the consumer obtains satisfaction, consumer develops a positive attitude toward the seller in the form of consumer trust (Jin et al., 2015; Matthews et al., 2014; Osman & Sentosa, 2013). This finding provides an opportunity to the cellular service providers to consider the importance of customer satisfaction for inculcating trust in cellular consumers. So cellular marketers should keenly consider customer satisfaction and happiness while developing marketing strategies.

This empirical result is consistent with past studies on the impact of customer satisfaction on customer trust by Lee et al. (2015) in cellular sector, Trif (2013) in business to business relationship, Wah Yap et al. (2012) in the banking sector and Suki (2011) in mobile commerce.

The following section discusses the insignificant direct determinants of customer trust.

5.5.4 Perceived Value and Customer Trust

The perceived value found to be an insignificant determinant of customer trust. It implies that value perception does not help to generate customer trust in cellular sector of Pakistan. Since the value perception in cellular sector of Pakistan is not distinctive as explained previously (section: 5.3.4, 5.4.4). This belief about value does not let the consumer engage in trust for the cellular service provider. So, it is necessary for the cellular service provider to communicate the value generated by consumption of their services to the consumers. Moreover, the cellular service providers should communicate the distinct value consumers will enjoy for utilizing their services. This will help to improve the perception of value in the eye of the customers in Pakistan.

Past studies by Chung, Oh, et al. (2015) in the mobile industry and Wang and Xu (2008) in online shopping sector found that perceived value is an insignificant determinant of customer trust. Hence while designing the marketing campaigns the cellular service providers should deliberately communicate the value they are offering to their consumers compared to the competitors.

5.5.5 Sales Promotion and Customer Trust

Sales promotion has an insignificant relationship with customer trust. This finding may lead to the proposition that the consumers do not develop trust on the cellular service provider based on the monetary and non-monetary sales promotion offerings. It further elaborates that sales promotions might help to engage consumer for the consumption of cellular services but it does not play a critical role in developing customer trust on the

cellular service providers of Pakistan. One possible reason for this behaviour is, the cellular consumers of Pakistan have a concern regarding the transparency of sales promotion tariffs. In addition, the sales promotion tariffs are complexed enough to confuse the users. This complexity does not let the consumers develop a sense of trust on the cellular service provider (Rab, 2012).

Furthermore, there are numerous sales promotion offers in the cellular sector of Pakistan (for example Ufone's UWon Package, Zong's 50 paisa call, Mobilink's JazzOne package, Telenor's 7 hours in 7 Rupees and Warid's 60 paisa call) which have transparency issue (Khan, 2011). This lack of transparency in sales promotions does not allow the consumers to develop trust on the cellular service providers. Hence, it is very important for cellular service providers in Pakistan to increase the transparency of sales promotion offerings to win consumers' trust.

5.6 Objective 4: Mediating Effect of Customer Satisfaction

This study proposes the mediating effect of customer satisfaction between the relationship of the exogenous variable (perceived service quality, perceived value, sales promotion and perceived corporate social responsibility) and customer loyalty. Customer satisfaction mediates the relationship between perceived service quality-customer loyalty and perceived corporate social responsibility-customer loyalty. However, it does not mediate the relationship between perceived value-customer loyalty and sales promotion-customer loyalty.

The following section describes each significant relationship in detail.

5.6.1 Perceived Service Quality-Customer Satisfaction-Customer Loyalty

Customer satisfaction is a significant and positive mediator for the relationship between perceived service quality and customer loyalty. The findings suggest that customer loyalty can be generated by improving customer satisfaction through offering high quality and reliable service. High-quality services can be provided by the support staff of the company that have the required knowledge to answer customer questions. They should understand specific customers' needs, able to handle problems that arise and entertain customers' complaints or enquiries in a friendly manner. These quality oriented strategies help to improve customers' happiness and satisfaction hence leading to promote loyalty in Pakistani cellular customers.

This empirical result is consistent with the past studies conducted by Lee (2013), Deng et al. (2010) as well as Lai et al. (2009) in cellular sector. Moreover, Chang and Yeh (2017) in bus services, Han and Hwang (2014) in medical clinics also found that customer satisfaction is a positive and significant mediator of customer loyalty.

Moreover, this finding is also consistent with Oliver's four-stage loyalty model (1999), which states that consumers develop action loyalty (stage four) after passing through affective loyalty (customer satisfaction). So, once the cellular consumers in Pakistan perceived to receive high-quality service, they feel good and become happy with their cellular service provider which leads to strengthening the customer loyalty. So in the context of the cellular service sector of Pakistan, customer satisfaction is very important along with service quality, because customer satisfaction plays a causal role in transmitting the impact of service quality to customer loyalty. So, while developing the

marketing plans for improving customer loyalty, the marketers should consider the happiness and satisfaction of customers along with maintaining the quality of services.

5.6.2 Perceived CSR-Customer Satisfaction-Customer Loyalty

Customer satisfaction is a significant and positive mediator for the relationship of perceived corporate social responsibility and customer loyalty. It highlights the importance of perceived CSR in the presence of customer satisfaction for achieving customer loyalty. It indicates that cellular providers' participation in solving social issues beyond mere profit generation gains customer happiness in Pakistan. This inculcates satisfaction among cellular consumers which ultimately reflect loyalty among them.

However, previously (section: 5.3.6) perceived CSR revealed to be an insignificant direct determinant of customer loyalty. This instance is supported by Oliver's four stage loyalty model. According to Oliver's (1999) four-stage loyalty model, loyalty is developed in stages, where at first stage consumers engage in cognitive loyalty by looking at the societal benefits (CSR) generated by seller, which leads to the second stage of loyalty called affective loyalty (customer satisfaction), which leads the consumers towards customer loyalty in later stages.

This empirical result is coherent with the past studies conducted by Sindhu and Arif (2017) as well as Islam et al. (2013) in cellular sector, Chang and Yeh (2017) in bus services, Park et al. (2017) for consumer perception about CSR, Pérez and Bosque (2015) in banking sector and Swimberghe and Wooldridge (2014) in restaurant industry

for studying the mediating effect of customer satisfaction between the relationship of perceived corporate social responsibility and customer loyalty.

So in the cellular service sector of Pakistan, perceived CSR is an important factor for generation of loyalty by stressing on customer satisfaction at the same time. It further suggests that cellular operators in Pakistan are required to engage more and more in CSR activities and successfully implement the defined CSR policies to win consumer's satisfaction. The cellular service providers are required to design and participate in those CSR activates which satisfy the cellular consumers. Once they are succeeded to achieve customer satisfaction, it will develop loyalty in cellular consumers.

The following section discusses the insignificant relationships.

5.6.3 Perceived Value-Customer Satisfaction-Customer Loyalty

The empirical results of this study show that customer satisfaction does not mediate the relationship between perceived value and customer loyalty. It reveals that perception of value does not develop satisfaction among cellular consumer of Pakistan, hence does not help to achieve the goal of customer loyalty. Since Pakistani cellular service sector is highly competitive and consumers are unable to make clear comparisons of the benefits of the services they consume with the competing operators. It fades the value perception, which does not lead to customer satisfaction. This finding is similar to the study of Chen and Tsai (2008), who suggested to explicitly share the “value for money and cost versus benefits comparisons with competitors” to improve consumers perception of value.

So, in the context of Pakistani cellular service providers, the sellers are required to clearly communicate the value for money element along with being a worthy choice for the consumers compared to the competitors to engrave satisfaction and ultimately loyalty among cellular consumers.

5.6.4 Sales Promotion-Customer Satisfaction-Customer Loyalty

Customer satisfaction does not mediate the relationship between sales promotion and customer loyalty. It elaborates that monetary and non-monetary sales promotions do not play a significant role for engaging in loyalty through customer satisfaction. This empirical finding is consistent with the results of Wahab and Hassan (2015).

Moreover, these findings suggest that cellular service providers in Pakistan should focus on customer satisfaction and customer loyalty as well while designing the sales promotion offers, other than just having a competitive mindset. This changed strategy will help them to utilize the sales promotion offers as a trigger for developing loyalty through satisfaction (Dutsenwai et al., 2015; Wahab & Hassan, 2015; Zhang & Tang, 2010).

5.7 Objective 5: Mediating Effect of Customer Trust

Customer trust proposes to mediate the relationship of exogenous variables (perceived service quality, perceived value, sales promotion, perceived CSR) and customer loyalty. Two out of four hypothesis reveal that customer trust is a significant and positive mediator between the relationships of perceived service quality-customer loyalty and perceived CSR-customer loyalty. However, customer trust does not mediate

the relationship of perceived value with customer loyalty and sales promotion with customer loyalty.

The following section describes significant relationships one by one.

5.7.1 Perceived Service Quality-Customer Trust-Customer Loyalty

Customer trust found to be a significant and positive mediator for the relationship between perceived service quality and customer loyalty. It indicates that when the cellular service providers have up to date physical facilities, responsive and reliable customer service staff who show empathy to cater the customers' requirements, customers develop trust on the service provider. Once they trust the cellular service provider, they are more likely to engage in customer loyalty. It also demonstrates that for cellular service providers, it is very important to develop a sense of trust in customers by reflecting good intentions for customers. In addition, the cellular service provider should be reliable and trustworthy at all the times for maintaining the quality of services. This trust in service quality will translate into customer loyalty.

This empirical result is consistent with previous studies conducted by Dahiyat et al. (2011) in cellular sector, Marakanon and Panjakajornsak (2017) in the electronic industry, and Auh (2005) in hair care industry. This phenomenon is also consistent with Oliver's (1999) four-stage loyalty model, which states that consumers after developing cognitive loyalty, engage in conative loyalty by developing trust on the cellular service provider and generate action loyalty. Since cellular services are intangible so it is very critical for Pakistani cellular service providers to develop a positive perception of their service quality to be trusted by the consumer to gain their loyalty. Hence, the cellular

service providers should invest on tangibles of their service centres, proper recruitment and training of their employees being reliable, responsive and empathetic to develop a sense of professionalism and trust in the eye of consumers to win their loyalty.

5.7.2 Perceived CSR-Customer Trust-Customer Loyalty

The empirical results of this study show that customer trust is a significant mediator for the relationship between perceived corporate social responsibility and customer loyalty. This is because when cellular service providers in Pakistan have a strong sense of corporate social responsibility and help to solve social problems, the consumers are more likely to trust the sellers. Another reason for developing trust in the seller is its attitude to work for the well-being of society beyond the mere generation of profits. This sense of corporate social responsibility makes the seller worthy enough to be trusted as being responsible for the society and its consumers. Ultimately this perception leads to inculcate loyalty among the consumers.

This empirical result is consistent with previous studies conducted by Sindhu and Arif (2017) in cellular sector, Halim and Hermawan (2017) in the airline industry, Park et al. (2017) for consumers' perception about CSR and Martínez and Bosque (2013) in the hotel industry.

This is also consistent with Oliver's (1999) four-stage loyalty model, which states that consumers evaluate the benefits (cognitive loyalty) offered by the cellular service provider for the well-being of society beyond the mere generation of profits. As a result, the consumers engage in a positive attitude towards the seller by developing trust on them (conative loyalty). Hence, they develop action loyalty for the cellular service

provider. So cellular service providers in Pakistan should focus on participating in corporate social responsibility activities to enhance the consumer trust and ultimately loyalty.

These findings provide great insights regarding the mediating effect of customer trust for translating the impact of CSR on customer loyalty which was previously insignificant directly (CSR is an insignificant direct determinant of customer loyalty, section 5.3.6). So, it is very important for cellular service providers to impart trust in cellular consumers to improve the effectiveness of CSR participation. They should plan the CSR activities to assure the consumers about their good intentions, honesty and responsibility toward societal wellbeing. For example, the cellular service providers can increase their participation for disaster relief, preserving the ecosystem and improving healthcare facilities. This participation will enhance customer trust on their cellular service providers as responsible and honest, hence improving customer loyalty.

The insignificant relationships for mediating role of customer trust are discussed below/

5.7.3 Perceived Value-Customer Trust-Customer Loyalty

According to the results, customer trust is not a significant mediator of the relationship between perceived value and customer loyalty. This result implies that perceived value does not help to generate or improve cellular customers' trust. As discussed earlier (section 5.5.4, 5.6.3), the consumers do not perceive any difference for cellular offerings or get confused to due to the complexity of cellular service offers, this may cause no contribution towards trust and loyalty generation.

Hence, it is necessary that cellular service providers in Pakistan deliberately communicate the value consumers will receive compared to the other competitors for using their service. Moreover, there is a need to increase the transparency of the value consumers receive for the money they pay in cellular sector. This will help to gain consumer trust and customer loyalty.

However, past studies by Karjaluoto et al. (2012) in the cellular sector and Sindhu and Arif (2017) in hospital industry found contrary results for the mediating role of customer trust for the relationship between perceived value and customer loyalty.

5.7.4 Sales Promotion-Customer Trust-Customer Loyalty

Results reveal that customer trust is not a significant mediator between the relationship of sales promotions and customer loyalty. It establishes that sales promotions don't help to gain consumers trust and customer loyalty. This result is consistent with Baig et al. (2015). It also elaborates that cellular service providers in Pakistan offer monetary and non-monetary sales promotions (in the form of price discounts, lucky draws, free minutes, SMS and internet bundles) which fail to engage consumers to develop attitudinal loyalty (customer trust) towards the seller. So cellular service providers should focus on engaging consumers in attitudinal loyalty through sales promotions (Pi & Huang, 2011). This attitudinal loyalty will proceed to behavioural loyalty (action loyalty) to retain the consumers to rebuy the services and say positive things about the seller (Oliver, 1999).

According to Khan (2011) and Shaikh (2015), there is lack of transparency of sales promotion tariffs, whereby cellular operators do not disclose the complete fee/charges

for sales promotions offerings resulting in eroding consumers' trust. Hence, the cellular service providers in Pakistan, while designing the monetary and non-monetary sales promotions should keep in view the element of trustworthiness by the consumer and should disclose the complete fee for utilizing any sales promotion offer. The sales promotions should convey the sense of reliability and good intentions of the seller for the consumer. This customer trust will indoctrinate loyalty among the cellular service consumers.

5.8 Objective 6: Moderating Effect of Government Regulations

This study proposed moderating effect of the government regulations between customer loyalty and its direct determinants (perceived service quality, perceived value, sales promotion, corporate social responsibility, customer satisfaction and customer trust). The results show that government regulations is a significant moderator for the relationship of perceived value - customer loyalty and perceived corporate social responsibility - customer loyalty. However, it does not moderate the relationship between perceived service quality, sales promotions, customer satisfaction, and customer trust and customer loyalty.

The following section discusses the significant relationships.

5.8.1 Moderating Effect of Government Regulations for the Relationship of Perceived Value and Customer Loyalty

Government regulations moderate the relationship of perceived value and customer loyalty positively. It implies that when government regulates the value offerings in cellular sector, it helps to generate loyalty among the cellular consumers. However, the consumers do not relate the value as a determinant of loyalty in the absence of

government regulations (section 5.3.6). This is because consumers do not perceive the value for services offered by cellular service providers. However, when the government act as a nudge and influence the cellular sector to protect and promote the interests of consumers by regulating the prices, advertising, sales and other marketing activities of cellular service providers. This nudge reduces the ambiguity about the “value proposition” offered by the cellular service provider. As a result, it helps to promote loyalty among cellular consumers and increase the effectiveness of value perception in the eye of customers. For instance, the government has developed a consumer protection directorate and tariff awareness guide, according to which cellular operators are bounded to share the details (including all subscription charges) of all cellular service offers (Pakistan Telecommunication Authority, 2012b, 2017a). The regulations of government help to improve the value perception for cellular consumers.

Hence, this finding demonstrates that government regulations improve the effectiveness of perceived value to generate customer loyalty in the cellular sector of Pakistan. Subsequently, this result provides an opportunity to the government and policy-makers to understand the spillover effect of government regulations in the cellular sector of Pakistan. Furthermore, it offers the policy-makers to effectively plan the regulatory policies for protecting the consumers in the cellular sector of Pakistan with maintaining their loyalty for their cellular service providers. This loyal customer base will enhance stability and profitability of cellular service sector, which will help to improve the investment structure of cellular sector and will increase revenues for the government through cellular service providers. Hence, the government of Pakistan should consider the impact of its policies on the relationship of value perception and customer loyalty

while maintaining, amending, improving the existing cellular policies or introducing the new regulatory policies in the cellular sector of Pakistan.

Due to lack of similar studies justifying the moderating role of government regulations on the relationship of perceived value and customer loyalty. This study borrowed the past literature that endorsed the influence of other moderators on the relationship of perceived value and customer loyalty. For example Rahi (2016) found a significant positive moderating impact of the brand image on the relationship between perceived value and customer loyalty in the banking sector of Pakistan. Similarly, another study by Rahi and Ghani (2016) in internet banking of Pakistan reflect switching cost as a significant moderator between the relationship of perceived value and customer loyalty. Another study by Wang and Xu (2008) in online shopping industry of China, found a positive and significant moderation of online switching cost between the relationship of perceived value and customer loyalty.

5.8.2 Moderating Effect of Government Regulations for the Relationship of Perceived CSR and Customer Loyalty

Government regulations moderate the relationship of perceived corporate social responsibility and customer loyalty significantly and negatively. It implies that when government regulates the corporate social responsibility activities by cellular service providers, this regulation reduces the impact of those CSR activities on consumer loyalty. It is because participation in corporate social responsibility activities beyond the mere generation of profitability should be done voluntarily by cellular service providers without government intervention. Since CSR addressed social issues and it should not be a forced phenomenon. So when government regulate the cellular service

providers to participate in these CSR activities, the consumers may reduce their loyalty toward operator due to their forced/ bounded participation.

Another reason for this negative interaction (of perceived CSR and government regulations) is the low CSR participation by cellular service providers in Pakistan, which is evident by the following statement. The Federal Minister of Planning, Development and Reform states that telecommunication sector's participation towards CSR activities is small compared to other sectors. He further stressed the role of telecommunication sector for the wellbeing of society in following way: *"They should do more for philanthropy like the other industries do instead of gifting free minutes to their users"* (Rahman, 2015).

Another significant reason for this negative relationship is explained by Dholakia (2016). He suggests that sometimes the nudge can backfires and result to damage the seller's reputation and reduce customer loyalty. Beales et al. (2017) also support this argument that sometimes the government regulations result in unintended negative outcomes as in case of CSR and customer loyalty in this study.

It further has three implications for example the government should develop a regulatory system to understand its potential impact on consumer behaviours. The government should also communicate to Pakistani cellular consumers that its influence is for the wellbeing of cellular consumers. Secondly, the government should properly investigate the positive nudges for the better of cellular consumers and avoid those nudges which could be perceived negatively by consumers as in the case of perceived CSR and customer loyalty. Lastly, since the CSR is at its emerging stage of

implementation in the cellular sector of Pakistan, the cellular service providers should participate in CSR activities on their voluntarily will for the wellbeing of society without any enforcement of government regulation. This participation for the wellbeing of society will generate satisfaction, trust and ultimately loyalty among cellular consumers.

The insignificant moderating effects of government regulations are discussed below.

5.8.3 Moderating Effect of Government Regulations for the Relationship of Perceived Service Quality and Customer Loyalty

Government regulations do not moderate the relationship of perceived service quality and customer loyalty. It implies that government influence on cellular service sector to promote the quality of services and setting minimum standards of quality does not impact the consumer perception of service quality and customer loyalty. It is because consumers are concerned with the quality of services they receive irrespective of the influence of government on maintaining the quality of services. Moreover, cellular service sector of Pakistan is very competitive and has high competition, so every cellular service provider is trying to offer best quality services to consumers to keep them loyal. Hence, the external influence of government does not impact this already established phenomenon whereby perceived service quality is found to be a significant direct and indirect determinant of customer loyalty in the cellular sector of Pakistan (section 5.3.1, 5.6.1, 5.7.1).

Furthermore, Kettle, Hernandez, Sanders, Hauser, and Ruda (2017) also stressed that a nudge by the government is context specific. Such as, cellular operators being in the state of hyper-competition are already addressing the challenge of providing good

quality of services to cellular consumers to keep them loyal. So, there are instances that nudge do not always produce any response as in the case of perceived service quality and customer loyalty.

Furthermore, the cellular consumers already have strong loyalty for those cellular service providers who provide high quality of services, hence this nudge fails to produce any change in this existing relationship. Dholakia (2016) stated that sometimes, the government has the belief that until the consumers' are not nudged they will not be able to make the right decisions and shortsighted the consumers capabilities. This belief results in low or no impact of the nudge in the markets whereby consumers are rational about quality and can judge the quality without any nudge as in case of Pakistan's cellular sector.

5.8.4 Moderating Effect of Government Regulations for the Relationship of Sales Promotion and Customer Loyalty

Government regulations is an insignificant moderator for the relationship of sales promotions and customer loyalty. It established that sales promotions dose not results in customer loyalty even if they are well regulated by government regulations. Even though the transparency of the sales promotion is increased in the cellular sector of Pakistan by the government, they are not translated into customer loyalty. These results are also consistent with the mediation of customer satisfaction (section 5.3.4.3) and trust (section 5.3.5.3), whereby customer satisfaction and trust also failed to transform the sales promotions into customer loyalty.

One of the reasons for this behaviour of cellular consumers is that the sales promotions are short-term in nature (Sajid & ur Rehman, 2013) which only leads to generate

satisfaction upon consumption of those promotions, but may fail to inculcate loyalty even in the presence of government regulations. For example, Warid telecom offers sales promotion “Warid Sab Ki Jeet Offer for Prepaid Customers to Win Rs.1 Million” for a limited time period. Similarly, Telenor Pakistan recently offers “Sim lagao offer” for few days according to which consumers can enjoy free minutes and sms for few days (Telenor Pakistan, 2018). So, these limited time sales promotions fail to generate loyalty over the longer time period.

These findings open a debate on the effectiveness of sales promotions which are heavily offered by cellular services providers in Pakistan. So, it is necessary for cellular operators to define the motives of the sales promotions offers and how the investment on these sales promotions can be translated into the goal of achieving customer loyalty.

On the other hand, it is very important for the government to understand the importance of designing the regulatory policies, its motives, and the way of its communication because the way of designing and communication of nudge has a strong influence on behaviours (Gneezy, Meier, & Biel, 2011). Even, it can fade the effect of government regulations on consumer behaviour similar to this scenario, where the government has developed the regulation for monitoring the sales promotion tariffs but failed to influence the consumer behaviour.

These findings also reflect the lack of awareness on the part of cellular consumers about the regulatory reforms made by the government in the form of tariff awareness guide. Dholakia (2016) as well as Spiegler (2015) support this argument that sometimes the nudge is too weak or too narrowly communicated to promote a specific behaviour and

failed to generate a response. In addition, descriptive analysis (section 4.6, government regulations Mean: 3) also reflects that cellular consumers believe that government participation in the cellular sector is somewhat low. So, it is very important for the government to educate the consumers and increase consumers' awareness about the regulation developed for the well-being of consumers in the cellular sector of Pakistan.

5.8.5 Moderating Effect of Government Regulations for the Relationship of Customer Satisfaction and Customer Loyalty

Government regulations play the role of an insignificant moderator for the relationship between customer satisfaction and customer loyalty. It suggests that when the satisfied consumers face the government regulations, it does not impact the level of their loyalty. It further elaborates that when the consumers are pleased and happy with the cellular services provider, they are not influenced by the government regulations and stay loyal to the cellular services provider. This result may occur due to the fact that customer satisfaction is a significant direct determinant of customer loyalty in the cellular sector of Pakistan (section 5.3.2).

Another reason for this finding in the cellular sector of Pakistan might be that customer satisfaction is not taken care by the government exclusively, rather it is more focused by cellular service providers, hence producing no effect of government regulations.

Furthermore, it provides a deep insight regarding the government regulations, whereby government need to know, when and where to intervene as a regulatory body for the wellbeing of the cellular consumers. So, it is very important for the government to know when or where to influence consumer behaviour since the influence of all the nudges do not work in all circumstances (Carroll, 2017).

Due to the lack of previous findings on moderating role of government regulations, this study borrowed some instances in marketing literature where moderators other than government regulations are unable to generate significant influence between the relationship of customer satisfaction and customer loyalty (Veloutsou, 2015; Walsh, Evanschitzky, & Wunderlich, 2008; Yang & Peterson, 2004).

5.8.6 Moderating Effect of Government Regulations for the Relationship of Customer Trust and Customer Loyalty

Government regulations do not moderate the relationship of customer trust and customer loyalty. It implies that the customers who trust their cellular service providers are not influenced by the influence of government regulations to develop loyalty for the cellular service providers. It also elaborates that since consumers believe that their cellular services providers are reliable, work with good intentions are trustworthy they don't seek for the further influence of government to protect their interests by its regulations. Since customer trust is a significant determinant of customer loyalty as mentioned previously (section 5.3.3) and carefully controlled by cellular operators in Pakistan, it might result in the insignificant influence of government regulations.

So in the context of the cellular service sector of Pakistan, if the seller is successful to win consumer trust, the consumers are less likely to be influenced by the government regulations. Hence government regulations do not influence the loyalty of cellular consumers who trust their seller.

Recently Paulssen, Roulet, and Wilke (2014) and Veloutsou (2015) also found the insignificant impact of moderating interactions between the relationship of customer trust and customer loyalty in marketing literature.

5.9 Implications of Study

In the light of the findings, this study has some important theoretical, practical and methodological implications which are given in following sections one by one.

5.9.1 New Model of Customer Loyalty Derived from this Study

To recapitulate, figure 5.1 summaries the significant relationship derived from the findings of this study. According to the findings, perceived service quality is a significant positive direct determinant of customer satisfaction, customer trust and customer loyalty. In addition, it is found to be a significant positive indirect determinant of customer loyalty through mediation of customer satisfaction and customer trust.

Furthermore, sales promotion found to be a significant positive direct determinant of customer satisfaction. Besides, perceived CSR is a significant positive direct determinant of customer satisfaction and customer trust. Moreover, it is a significant positive indirect determinant of customer loyalty through mediation of customer satisfaction and customer trust. Likewise, customer satisfaction is a significant positive direct determinant of customer trust and customer loyalty. Also, customer trust is a significant positive direct determinant of customer loyalty.

Additionally, government regulations has a significant positive moderating influence on the relationship of perceived value and customer loyalty. Furthermore, government regulations also moderates the relationship of perceived CSR and customer loyalty significantly and negatively.

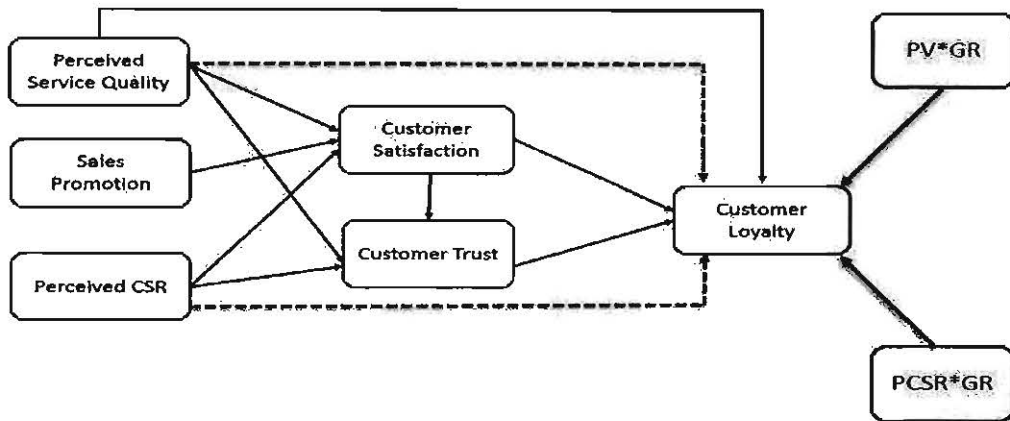


Figure 5. 1

Derived Model

Note: Red dotted line arrows shows mediation through customer satisfaction and customer trust. Blue arrows shows moderation interaction effects.

5.9.2 Theoretical Contributions

Despite the fact that extensive research has been done on customer loyalty and its direct and indirect determinants, in the light of Oliver's four-stage loyalty model, this research addressed some under researched phenomena in cellular service sector of Pakistan. For example, this study addressed the importance of corporate social responsibility activities as direct and indirect determinant of customer loyalty in cellular service sector of Pakistan, which was previously understudied (Ali et al., 2010; Sindhu & Arif, 2017). Despite the fact that, the cellular service providers are recognized nationally and internationally for promoting CSR activities in Pakistan (Dawn, 2013; Khan, 2012).

Moreover, there was lack of empirical studies in Pakistani cellular service sector to investigate the direct and indirect determinants of customer loyalty considering the following constructs under consideration, perceived service quality, perceived value, sales promotion, perceived CSR, customer satisfaction, customer trust and government regulations.

Furthermore, this study contributed to the existing body of knowledge by addressing the changing role of government regulations in cellular service of Pakistan and studied its influence on the cellular service consumers. So this study provides an empirical foundation based on Oliver's four-stage loyalty model and the nudge theory to understand the phenomenon of loyalty in the cellular service sector of Pakistan.

Most importantly, the proposed research framework also try to enhance the robustness of Oliver's four-stage loyalty model by incorporating a moderating variable based on the suggestion of Evanschitzky and Wunderlich (2006), Han and Hyun (2012), Han, Kim, and Kim (2011) and Perugini and Bagozzi (2001). This study has contributed toward existing literature by providing a more refined customer loyalty model in cellular sector of Pakistan whereby the impact of external influences such as government regulations are overlooked previously.

Furthermore, this study used the nudge theory which has its origin in behavioral economics to support the moderating role of government regulations. So, this study has encouraged the contemporary researcher in the field of customer loyalty to address recently raised issues in different cellular settings including Pakistan, by using the lens of behavioral economics.

5.9.3 Practical Contributions

This study provides some very useful practical contributions. According to the results (section 5.9.1), perceived service quality revealed as the significant positive direct determinant of customer loyalty, customer satisfaction, customer trust. It is also proved

to be a significant positive indirect determinant of customer loyalty through mediation of customer satisfaction and customer trust.

These findings highlight the importance of service quality for attaining the goals of customer satisfaction, trust and loyalty in cellular service sector. So, it is very important to focus on maintaining the quality of services by meeting the industry quality of services standards. This can be done by improving the tangibles of customer service centers, for example, having the visually appealing cellular service material, up to date equipments and electronic systems to facilitate the smooth flow of services to the consumers.

Likewise, the cellular services providers are required to have quality oriented cellular staff. For example: the cellular services providers' staff should be reliable and responsive in a way that they should have proper knowledge about prevailing cellular tariffs/plans/offerings and procedural inquiries to deal with the diverse needs of cellular consumers in a reliable and empathic manner. This can be achieved by designing proper training programs for the cellular staff to improve their behavior on being responsive, reliable and empathetic.

In addition, the cellular operators should explicitly communicate the importance of service quality, for example, the corporate values of Telenor Group reflects on making things easier for its customers, providing services on time in a reliable, responsive and empathetic manner (Telenor Group, 2017). All of these quality oriented strategies are expected to increase customer satisfaction, trust and loyalty.

Sales promotion revealed to be a significant positive determinant of customer satisfaction (section 5.9.1). This finding suggests that while designing the monetary and non-monetary sales promotions, the cellular service providers should consider customer satisfaction and happiness as the most important aspects. This orientation will help the cellular service providers to improve the effectiveness of sales promotion for attaining customer satisfaction in cellular sector of Pakistan.

Another key contribution of this study is highlighted by the significant direct impact of Perceived CSR on customer satisfaction and trust and indirect impact on customer loyalty via mediation of customer satisfaction and customer trust (section 5.9.1). These findings stressed that CSR perception has a significant positive impact on cellular consumers' satisfaction, trust and loyalty (indirectly) in cellular sector of Pakistan. Furthermore, Pakistan is an under developed country, it always requires a volunteer participation of different business entities to solve social issues, which is well reflected in the findings of this study. This study also revealed that cellular consumers believed that cellular sector contribution to CSR activities is not enough (section 4.5). So, keeping this huge opportunity to participate in solving social issues beyond mere generation of profits, cellular services providers should deliberately and explicitly promote corporate social responsibility. They should properly plan corporate social responsibility strategies to address this consumers' concern to win their satisfaction, trust, hence loyalty.

Moreover, this study provides support for the significant positive impact of customer satisfaction and customer trust on customer loyalty. According to Oliver's four stage loyalty model, loyalty develops in stages, so cellular operators while developing

strategies for improving customer loyalty, should consider the importance of customer satisfaction and trust as significant direct determinant of loyalty. They should also emphasis on customers' satisfaction and trust by considering them important mediators for perceived quality and perceived CSR for customer loyalty in cellular sector of Pakistan.

Most importantly, this study foregrounds the moderating role of government regulations for generating loyalty in cellular service sector of Pakistan. So the results highlight the role of government regulations as a significant positive moderator for the relationship of perceived value and consumers' loyalty. Moreover, it also highlights the moderating role of government regulations on the relationship of perceived corporate social responsibility and customer loyalty significantly and negatively.

These results have a very important contribution toward the body of extent knowledge and practice in cellular service sector of Pakistan. These results endorsed the role of policy making/government regulations in shaping or changing consumer behavior including customer loyalty. So, these findings put forward some very useful practical insights for government as a policy maker and cellular service providers.

The government should properly plan the regulations for protecting the wellbeing of cellular consumers, because government regulations can improve or hurt the loyalty of cellular consumers, as in case of negative moderation for CSR. So, the government should be very vigilant and careful while influencing as a regulatory body in cellular service sector as it can reduce the positive efforts of cellular service providers to support the wellbeing of society and can result to reduce customer loyalty. This finding provides

a very important implication for government in different ways. For example: the government should properly investigate how it can promote positivism in cellular service setting, where government should influence and where it should avoid to influence. Moreover, government should carefully design the regulation policies by keeping in view the spillover effect on the cellular consumers.

The cellular service providers should also collaborate with government to avoid such policy interventions which could harm consumer loyalty. The cellular service providers should enhance their vision from their personal wellbeing to consumers' wellbeing. For example, if the cellular service providers voluntarily participate and promote corporate social responsibility activities sufficiently, government do not need to influence; hence, consumer perception will remain positive about the seller as a positive contributor for the wellbeing of society. Moreover, cellular service providers should follow government regulations to achieve the goal of customer loyalty apart from merely focusing on service quality, satisfaction and trust. Because negligence to considering the government regulations may reduce the chance of loyalty generation by deteriorating the importance of perceived value among customers in Pakistan.

5.9.4 Methodological Contributions

This study offered some very important methodological insights which are missing in existing literature. These contributions include the operationalization of SERVQUAL model, sales promotions as second order formative construct and operationalization of government regulation as formative first order construct. If the model is mis-specified as formative or reflective, it can cause to effect the practical and theoretical explanation of constructs (Jarvis et al., 2003). Hence, the operationalization of PSQ, SP and GR as

formative constructs provide an opportunity to avoid model misspecification and deletion of important measures.

Moreover, this study used a two-stage approach to address the unique need of the research framework which has both reflective and formative constructs. There is also lack of empirical studies which uses two-stage approach to test the customer loyalty models in marketing. So, this study provides a methodological guide to address the lack of empirical studies on how to incorporate reflective and higher order formative constructs in a single model to avoid the misspecifications of model formations and construct operationalization.

5.10 Limitations of Study

Like other research studies, this research also has some limitations which should be considered before generalizing the results. Firstly, this study is limited to prepaid cellular service consumers only. Secondly, this study only focused on the capital cities of Pakistan, which does not include any suburb or rural area. Moreover, this study is only confined to one country: Pakistan's cellular service sector, therefore, the results may differ in different economies and different cultural settings.

In addition, this research used cross-sectional data collection approach for data collection, so it may happen that the studied variable may change over time and some other factors may influence the cellular service consumers' loyalty behaviour. Additionally, this study is confined to the cellular service sector of Pakistan, so the determinants of customer loyalty may vary in other service settings and may produce different results.

5.11 Suggestions for the Future Research

The limitations of this study provide the basis for future research like incorporating the rural consumers to widen the scope of the present study and its findings. Similarly, comparative studies can also be conducted in comparable economies of Asia to strengthen the applicability of the existing research framework.

Furthermore, future studies can research a more detail loyalty framework focused on the determinants of loyalty for the particular cellular services i.e. internet services or mobile banking or particular cellular consumer segments i.e. post-paid users.

Since it is a cross-sectional study due to time and cost constraints, longitudinal studies can be conducted to understand the phenomenon of loyalty in a deeper manner with the changing cellular service sector environment.

5.12 Conclusion

Taken together, the present study has provided additional evidence to the growing body of knowledge concerning the direct and indirect determinants of customer loyalty including the moderating role of government regulations in the cellular service sector of Pakistan. The results from this study lend support to the key theoretical propositions. In particular, the current study has successfully answered all of the research questions and objectives despite some of its limitations. While there have been many studies examining the direct and indirect determinants of customer loyalty, however, the present study addressed the theoretical gap by incorporating government regulations as a significant moderating variable.

In addition to the theoretical contributions, the results from this study provide some important practical implications to cellular service providers, marketers and government body/ policymakers for structuring positive changes in the cellular service sector for achieving satisfaction, trust and loyalty of cellular consumers of Pakistan. Furthermore, on limitations of the current study, several future research directions are drawn.

In total, this study proposed twenty-nine direct, indirect and moderating hypothesis, out of which fifteen hypothesis are supported while rest of the fourteen are not supported. There are three direct significant positive determinants of customer loyalty in the cellular service sector of Pakistan which are perceived service quality, customer satisfaction and customer trust while perceived value, sales promotion and perceived corporate social responsibility are insignificant determinants of customer loyalty.

Perceived service quality, sales promotion and perceived corporate social responsibility are direct significant and positive determinants of customer satisfaction, however, perceived value is an insignificant determinant of customer satisfaction in the cellular service sector of Pakistan.

Furthermore, perceived service quality, perceived corporate social responsibility and customer satisfaction are direct positive and significant determinants of customer trust while perceived value and sales promotion are insignificant determinants of customer trust in the cellular service sector of Pakistan.

The indirect significant positive determinants of customer loyalty through the mediation of customer satisfaction are perceived service quality and perceived corporate social

responsibility while the perceived value and sales promotions are the insignificant indirect determinant of loyalty in the cellular sector of Pakistan.

In addition, the indirect significant positive determinants of customer loyalty through the mediation of customer trust are perceived service quality and perceived corporate social responsibility, however, perceived value and sales promotion are insignificant indirect determinants of customer loyalty in the cellular service sector of Pakistan.

The government regulations play the role of a significant positive moderator for the relationship between perceived value and customer loyalty. Moreover, government regulations also moderate significantly and negatively the relationship of perceived corporate social responsibility and customer loyalty. However, it fails to play the role of a moderator for the relationship of perceived services quality – customer loyalty, sales promotion-customer loyalty, customer satisfaction – customer loyalty and customer trust - customer loyalty.

Furthermore, this study provide some practical, theoretical and methodological insights for developing, maintaining and enhancing the loyalty of cellular consumers in the current competitive government regulated cellular service sector of Pakistan.

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APPENDIX A
PAST STUDIES ON OLIVER'S FOUR STAGE LOYALTY MODEL

Author	Setting	Country	Variables Studied
Coelho do Vale and Verga Matos (2017)	Retail Industry	Portugal	Private Label Loyalty, Four Loyalty Stages, Moderators: In-store Loyalty Factors and Economic Loyalty Drivers
A. Lee et al. (2017)	Hotel Industry	South Korea	Customer Satisfaction, Cognitive Loyalty, Affective loyalty, Conative Loyalty, Action Loyalty. Moderators: Age, Gender, Income and Length of Relationship.
Miguens and Vázquez (2017)	Online Banking	Spain	Customer Satisfaction, Customer Trust, Web Quality, Switching Barriers
Asiamah et al. (2016)	Cellular Sector	Ghana	Lucky Draw Sales promotion, Affective Loyalty, Conative Loyalty, Action Loyalty
Jin et al. (2015)	Hotel Industry	USA	Brand Prestige, Trust, Perceived Risk, Customer Satisfaction, Customer Loyalty
Thaichon and Quach (2015)	Internet Service Providers	Thailand	Overall Service Quality, Customer Trust, Customer Satisfaction, Customer Commitment, Customer Value, Attitudinal Loyalty, Behavioural Loyalty
Han and Hwang (2015)	Tourism Industry	USA	Cognitive Loyalty, Affective Loyalty, Conative Loyalty, Action Loyalty, Social Norms, Moral Norms, Awareness of Consequences, Aspiration of responsibility.
Roy, Butaney, et al. (2014)	Online Purchasing	USA	Viral Marketing Activity, WOM and Four Stages Of Oliver's Customer Loyalty Model
Alim and Ozuem (2014)	Cellular Sector	UK	E-CRM, Service Quality, Customer Selection, Customer Extension, Online Community, Information Quality and Ease Of Navigation, Four Stages Of Oliver's Customer loyalty Model
Matthews et al. (2014)	Retail Industry	USA	Brand Awareness, Brand Image, Brand Perceived Quality, Brand Emotional Value, Brand Satisfaction, Brand Loyalty
Yeng and Mat (2013)	Retail Industry	Malaysia	Perceived Value, Service Quality, Convenience, Product Quality, Product Selection, Store Atmosphere, Promotion Activity, Customer Satisfaction, Loyalty Programs, Retailer Brand Equity, Customer Commitment and Affective Loyalty, Conative Loyalty, Action Loyalty
Fraering and Minor (2013)	Financial Institutes	USA	Satisfaction, Loyalty, Fortitude, Sense of virtual community
Han and Hyun (2012)	Hotel Industry	USA	Preference, Perceived Value, Service Quality, Relational Investment, Image, Affective Loyalty, Conative Loyalty, Action Loyalty
Jahanzeb et al. (2011)	Hotel Industry	USA	Perceived Value, Service Quality, Positive Emotions, Negative Emotions, Satisfaction, Commitment, Revisit Intention, Inertia, Action Loyalty
Yuksel et al. (2010)	Tourism Industry	Turkey	Place dependence, Affective attachment, Place identity, Satisfaction, Cognitive Loyalty, conative loyalty, affective loyalty
Roy et al. (2009)	Online Retail Industry	USA	Online Word of mouth and four stages of Oliver's customer loyalty model

Source: Compiled by Author

APPENDIX B

QUESTIONNAIRE

APPENDIX B.1 ENGLISH QUESTIONNAIRE



Dear Respondent,

I am a Ph.D. scholar at University Utara Malaysia. I am conducting research on “The Direct and Indirect Determinants of Customer Loyalty in Cellular Sector of Pakistan: The Moderating Role of Government Regulations” I request you to participate in this study by answering the attached questionnaire that will hardly take 5-10 minutes.

The questionnaire is anonymous, and your response will be used for the academic research purpose only.

Thank you for your cooperation.

Sincerely,

Beenish Tariq

School of Business Management, College of Business

Universiti Utara Malaysia,
Malaysia.
Cell # 00923454003139
binish_sh@live.com

(Section A)

1. Which type of cellular sim card(s) are you using?

☐ Prepaid ☐ Post-paid ☐ Both

2. Please select one most frequently used prepaid sim card cellular service provider to answer the following questions.

☐ Mobilink ☐ Telenor ☐ Zong ☐ Ufone ☐ Warid

Please rate your agreement or disagreement with each statement by checking a box using the following scale:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
	1	2	3	4	5	6	7
1. Perceived Service Quality							
(i) Tangibles							
1							
2							
3							
4							
(ii) Reliability							
5							
6							
7							
8							
9							
(iii) Responsiveness							
10							
11							
12							
13							

		1	2	3	4	5	6	7
(iv)	Assurance							
14	The behaviour of staff of my cellular service provider instils confidence in customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	I feel safe in doing transactions with my cellular service provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	The staff of my cellular service provider are consistently courteous with me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	The staff of my cellular service provider have adequate skills and knowledge to resolve customer's problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(v)	Empathy							
18	The staff of my cellular service gives me individual attention.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	My cellular service provider's service centres have operating hours convenient for all its customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	My cellular service has the staff who give me personal attention.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	The staff of my cellular service provider has my best interests at heart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	The staff of my cellular service provider understand my specific needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please rate your agreement or disagreement with below statement by checking a box using the following scale:

		Very Poor 1	Poor 2	Fair 3	Neutral 4	Good 5	Very Good 6	Excellent 7
23	Over all service quality of my cellular service provider is	1	2	3	4	5	6	7
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please rate your agreement or disagreement with each statement by checking a box using the following scale:

		Strongly Disagree 1	Disagree 2	Somewhat Disagree 3	Neutral 4	Somewhat Agree 5	Agree 6	Strongly Agree 7
		1	2	3	4	5	6	7
	2. Perceived Value							
1	The services offered by my cellular service provider are worthy of the purchase I made, compared to competitors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	My cellular service provider charges me fairly for similar products and services offered by competitors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Compared to competitors, my cellular service provider offers me more free services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Compared to what I pay to what I get, the services offered by my cellular service provider are value for money compared to competitors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3. Sales Promotions							
	(i) Monetary Sales Promotions							
1	My cellular service provider frequently offers monetary/ cash rewards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	My cellular service provider frequently offers lucky draw to win cash, motorbike, car or gold etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		1	2	3	4	5	6	7
5	My cellular service provider can be trusted at all times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Government Regulations								
1	The government sets minimum standards of quality for all the services sold by cellular service providers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	The government tests the quality of services provided by cellular service providers and make the results of these tests available to customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	The government exercises more responsibility for regulating the marketing activities done by cellular service providers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	The intervention of government is necessary to protect the interests of customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	In general, stricter control of cellular sector by the government is preferable to self-regulation by cellular service providers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Customer Loyalty								
1	I am a loyal customer of my cellular service provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	I will buy more services of my cellular service provider in next few years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	I consider my current cellular service provider my first choice for cellular services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	I have said positive things about my cellular service provider to my family and friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	I have recommended my cellular services provider to someone who sought my advice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Section B)

Please check (✓) the suitable option for questions 1-6.

1. How many prepaid sim cards you have?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. Have you ever switched your cellular service provider?

☐ No ☐ Yes (If yes, please answer question No. 3, else skip to question No. 4)

3. What was/were the main reason(s) for switching from your previous cellular service provider?

4. Which cellular packages do you buy?

☐ Voice calls and SMS ☐ Internet ☐ Both

5. For which service(s) you have visited customer service centre of your cellular service provider?
(You can select more than one option)

☐ New Sim Card Purchase ☐ Biometrics Verification ☐ Recharge Purchase

☐ Financial Services ☐ Transfer of Ownership ☐ Others please specify _____

6. Your current cellular service provider participates in which of the following corporate social responsibility activities (you can choose more than one options)

- ☐ Education Sector, example: developing school facilities, training programs for teachers etc.
☐ Health care, example: developing medical facilities, blood donations etc.
☐ Preserving Ecosystem, example: plantation of trees, drinking water filtration etc.
☐ Disaster Relief, example: support for earth quack, flood effected area etc.
☐ None of above
☐ Others, please specify _____

(Section C)
Demographics of Respondents

1. Current City of Residence

- ☐ Lahore ☐ Karachi ☐ Quetta ☐ Peshawar

2. Gender

- ☐ Male ☐ Female

3. Age

- ☐ Below 18 years ☐ 18-28 years ☐ 29-39 years
☐ 40-49 years ☐ 50-59 years ☐ 60 years and above

4. Education Level

- ☐ Middle and Below ☐ Matric ☐ Intermediate
☐ Bachelors ☐ Masters and above ☐ Other, (Please specify _____)

5. Marital Status

- ☐ Single ☐ Married ☐ Divorced/Widow or Widower

6. Position

- ☐ Student ☐ Job Holder ☐ House Hold Wife
☐ Self Employed ☐ Other, (Please specify _____)

If you are a job holder, please answer question No. 7 & 8, otherwise skip to question No. 9.

7. Which career level do you belong to?

- ☐ Entry Level ☐ Mid-Career ☐ Top Management ☐ Others (pls specify) _____

8. Job Type

- ☐ Private ☐ Government ☐ Semi-government

9. Average Income (Per Month)

- ☐ Below Rs. 15000 ☐ Rs. 15001- 32000 ☐ Rs. 32001- 49000
☐ Rs. 49001-66000 ☐ Rs. 66001- 83000 ☐ Rs. 83001-100,000
☐ Rs. 100,001 and above

Thank you for your time and cooperation

APPENDIX B.2
URDU TRANSLATION OF QUESTIONNAIRE



عزیز جواب دہندگان۔

میں یونیورسٹی اوتارا ملائیشیا میں پی ایچ ڈی کی طالب علم ہوں۔ میں "پاکستان کے سیلولر سروس میکر میں کسٹمر کی وفاداری کے بلواسطہ اور بالواسطہ عوامل اور حکومت کے قوانین کے اثرات" پر تحقیق کر رہی ہوں۔ میں آپ سے درخواست کرتی ہوں کہ اس سوالنامے کا جواب دینے کیلئے 5-10 منٹ مختص کریں



UUM
Universiti Utara Malaysia

شکریہ

مخلص،

بینیش طارق

اسکول آف بزنس مینجمنٹ، کالج آف بزنس

یونیورسٹی اوتارا ملائیشیا

سیل نمبر 00923454003139

ای میل binish_sh@live.com

سیکشن (اے)

آپ کس قسم کی سیلولر سم کارڈ استعمال کر رہے ہیں؟

☐ پری پیڈ ☐ پوسٹ پیڈ ☐ دونوں

مندرجہ ذیل سوالات کا جواب دینے کے لئے براہ کرم سب سے زیادہ استعمال کردہ پری پیڈ سم کارڈ سیلولر سروس فراہم کنندہ منتخب کریں:

☐ موبی لنک ☐ ٹیلی نار ☐ زونگ ☐ یوفون ☐ وارد

مندرجہ ذیل سوالات کے لئے ان میں سے ایک باکس کو منتخب کر کے اپنی رائے کا اظہار کریں۔

	1	2	3	4	5	6	7
	بہت زیادہ غیر متفق ہوں	غیر متفق ہوں	کسی حد تک غیر متفق ہوں	غیر جانبدار	کسی حد تک متفق ہوں	متفق ہوں	بہت زیادہ متفق ہوں
1							
(i) سروس کا متوقع معیار							
1							
2							
3							
4							
(ii) اعتبار							
5							
6							
7							
8							
9							
(iii) نمہ داری							
10							
11							
12							
13							

7	6	5	4	3	2	1	
							(iv) یقین دہاتی
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14 میرے سیلولر سروس فراہم کنندہ کے عملے کا رویہ صارفین میں اعتماد کا باعث بنتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15 میں اپنے سیلولر سروس فراہم کنندہ کے ساتھ ٹرانزیکشن کرنے میں محفوظ محسوس کرتا ہوں۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16 میرے سیلولر سروس فراہم کنندہ کا عملہ ہمیشہ میرے ساتھ عاجزی سے پیش آتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17 میرے سیلولر سروس فراہم کنندہ کا عملہ صارفین کے مسائل کو حل کرنے کے لئے مناسب مہارت اور علم رکھتا ہے۔
							(v) تفہیم
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18 میرے سیلولر سروس فراہم کنندہ کا عملہ مجھے ذاتی توجہ دیتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19 میرے سیلولر سروس فراہم کنندہ کے سروس سینٹرز نے، اپنے تمام صارفین کی خدمات کے لئے موزوں اوقات مقرر کئے ہوئے ہیں۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20 میرے سیلولر سروس فراہم کنندہ کے پاس ایسے ملازمین ہیں جو مجھے خصوصی توجہ دیتے ہیں۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21 میرے سیلولر سروس فراہم کنندہ کا عملہ میری ضروریات کو ترجیح دیتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22 میرے سیلولر سروس فراہم کنندہ کا عملہ میری مخصوص ضروریات کو سمجھتا ہے۔

مندرجہ ذیل سوال کے لئے ان میں سے ایک باکس کو منتخب کر کے اپنی رائے کا اظہار کریں۔

7	6	5	4	3	2	1	
بہترین معیار	بہت اچھا معیار	اچھا معیار	غیر جانب دار	منصفانہ معیار	خراب معیار	بہت زیادہ خراب معیار	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23 مجموعی طور پر، میرے سیلولر سروس فراہم کنندہ کی سروس کا معیار ہے

مندرجہ ذیل سوالات کے لئے ان میں سے ایک باکس کو منتخب کر کے اپنی رائے کا اظہار کریں۔

7	6	5	4	3	2	1	
بہت زیادہ متفق ہوں	بہت زیادہ متفق ہوں	کسی حد تک متفق ہوں	غیر جانب دار	کسی حد تک غیر متفق ہوں	غیر متفق ہوں	بہت زیادہ غیر متفق ہوں	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 سمجھی قدر
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 میرے سیلولر سروس فراہم کنندہ کی طرف سے پیش کردہ خدمات دوسروں کے مقابلے میں خریداری کے قابل ہیں۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 میرا سیلولر سروس فراہم کنندہ مجھے مسابقتی طور پر پیش کردہ مصنوعات اور سروسز کے لئے منصفانہ طور پر چارج کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 حریفوں کے مقابلے میں، میرا سیلولر سروس فراہم کنندہ مجھے زیادہ مفت سروسز فراہم کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4 میرے سیلولر سروس فراہم کنندہ کی پیش کردہ سروسز حریفوں کے مقابلے میں زیادہ فائدہ مند ہیں۔
							3 سیلز پروموشن
							(i) مالیاتی سیلز پروموشن
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 میرا سیلولر سروس فراہم کنندہ اکثر مالی / نقد انعامات پیش کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 میرا سیلولر سروس فراہم کنندہ اکثر نقدی، موٹر سائیکل، کار یا سونا جیتنے کے مواقع فراہم کرتا ہے۔

7	6	5	4	3	2	1	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 میرا سیلولر سروس فراہم کنندہ اکثر رعایتی قیمتوں کی کیپیشش کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4 میرا سیلولر سروس فراہم کنندہ اکثر، حریفوں سے کہیں زیادہ رعایتی قیمتوں کی کیپیشش کرتا ہے۔
(ii) غیر مالیاتی سلیز پروموشن							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 میرا سیلولر سروس فراہم کنندہ اکثر مفت منٹس پیش کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6 میرا سیلولر سروس فراہم کنندہ اکثر مفت ایس ایم ایس بنڈلز پیش کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7 میرا سیلولر سروس فراہم کنندہ اکثر مفت انٹرنیٹ بنڈلز پیش کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8 میرا سیلولر سروس فراہم کنندہ حریفوں سے کہیں زیادہ مفت منٹس، ایس ایم ایس اور انٹرنیٹ بنڈلز پیش کرتا ہے۔

مندرجہ ذیل سوال کے لئے ان میں سے ایک باکس کو منتخب کر کے اپنی رائے کا اظہار کریں۔

7	6	5	4	3	2	1	
بہترین معیار	بہت اچھا معیار	اچھا معیار	غیر جانب دار	منصفانہ معیار	خراب معیار	بہت زیادہ خراب معیار	
7	6	5	4	3	2	1	9 مجموعی طور پر میرے سیلولر سروس فراہم کنندہ کی سلیز پروموشنز کا معیار ہے
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

مندرجہ ذیل سوالات کے لئے ان میں سے ایک باکس کو منتخب کر کے اپنی رائے کا اظہار کریں۔

7	6	5	4	3	2	1	
بہت زیادہ متفق ہوں	بہت زیادہ متفق ہوں	کسی حد تک متفق ہوں	غیر جانب دار	کسی حد تک غیر متفق ہوں	غیر متفق ہوں	بہت زیادہ غیر متفق ہوں	
7	6	5	4	3	2	1	4 متوقع سماجی ذمہ داری
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 میرا سیلولر سروس فراہم کنندہ سماجی مسائل کو حل کرنے میں مدد کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 میرا سیلولر سروس فراہم کنندہ سماجی ذمہ داری پر توجہ دیتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 میرا سیلولر سروس فراہم کنندہ مقامی برادری کی بہبود کے لئے مناسب کام کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4 میرا سیلولر سروس فراہم کنندہ کچھ وسائل سماجی بہبود کی سرگرمیوں کے لئے مختص کرتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 میرا سیلولر سروس فراہم کنندہ منافع پر توجہ مرکوز کئے بغیر معاشرے کی خوشحالی کے لئے کام کرتا ہے۔
5 صارفین کا اطمینان							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 میرے سیلولر سروس فراہم کنندہ کی طرف سے دی گئی سیلولر سروسز اطمینان بخش ہیں۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 مجھے اپنے موجودہ سیلولر سروس فراہم کنندہ کے انتخاب کا فیصلہ اچھا احساس دیتا ہے۔
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 مجموعی طور پر میں اپنے موجودہ سیلولر سروس فراہم کنندہ کے انتخاب پر خوش ہوں۔
6 صارفین کا اعتماد							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 میرا سیلولر سروس فراہم کنندہ بہت ایماندار ہے۔

7	6	5	4	3	2	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	میرا سیلولر سروس فراہم کنندہ بہت ذمہ دار ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	میرا سیلولر سروس فراہم کنندہ ہمیشہ پیشہ ورانہ انداز میں کام کرتا ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	میرا سیلولر سروس فراہم کنندہ اچھے ارادے کے ساتھ کام کرتا ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	میرا سیلولر سروس فراہم کنندہ ہمیشہ قابل اعتماد سمجھا جا سکتا ہے۔					
7 حکومتی قوانین						
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	حکومت سیلولر سروس فراہم کنندہ کی طرف سے فروخت کی جانے والی تمام سروسز کی کوالٹی کے کم از کم معیار کو مقرر کرتی ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	حکومت سیلولر سروس فراہم کنندہ کی سروسز کی کوالٹی کی جانچ پڑتال کرتی ہے اور نتائج صارفین کو دستیاب کرتی ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	حکومت سیلولر سروس فراہم کنندہ کی طرف سے کی جانے والی مارکیٹنگ کی سرگرمیوں کو ریگولیٹ کرنے کے لئے زیادہ ذمہ داری کا مظاہرہ کرتی ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	سیلولر صارفین کے مفادات کی حفاظت کے لئے پی ٹی اے اور حکومت کی مداخلت ضروری ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	مجموعی طور پر، حکومت کی طرف سے سیلولر سیکٹر کا سخت کنٹرول سیلولر آپریٹرز کے از خود کنٹرول سے کہیں زیادہ بہتر ہے۔					
8 صارفین کی وفاداری						
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	میں اپنے سیلولر سروس فراہم کنندہ کا وفادار کسٹمر ہوں۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	میں اگلے چند سالوں میں اپنے سیلولر سروس فراہم کنندہ کی سروسز ہی استعمال کروں گا۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	میرا سیلولر سروس فراہم کنندہ میرا پہلا انتخاب ہے۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	میں نے اپنے سیلولر سروس فراہم کنندہ کی مثبت چیزیں دوست اور رشتہ داروں کو تجویز کی ہیں۔					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	جن لوگوں نے سیلولر سروسز خریدنے کا ارادہ کیا میں نے انہیں اپنا سیلولر سروس فراہم کنندہ تجویز کیا ہے۔					

سیکشن (بی)

براہ کرم سوالات 1-6 کے لئے مناسب باکس کو (✓) چیک کریں۔

(1) آپ کے پاس کتنے پری پیڈ سم کارڈ ہیں؟

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

(2) کیا آپ نے کبھی اپنے سیلولر سروس فراہم کنندہ کو تبدیل کیا ہے؟

☐ جی ہاں (اگر جی ہاں، تو سوال نمبر 3 کا جواب دیں، ورنہ سوال نمبر 4 کا جواب دیں)

(3) آپ کے پچھلے سیلولر سروس فراہم کنندہ سے سونچنگ کرنے کی بنیادی وجوہات کیا تھی؟

(4) آپ کون سے سیلولر پیکجز خریدتے ہیں؟

□ صوتی کال اور ایم ایس □ انٹرنیٹ □ دونوں

(5) آپ اپنے سیلولر سروس فراہم کنندہ کے کسٹمر سروس سینٹر کونسی سروسز کے حصول کے لئے آئے ہیں؟ (آپ ایک سے زیادہ باکس منتخب کر سکتے ہیں)

□ نئے سیم کارڈ کی خریداری □ ہائیو میٹرکس کی تصدیق □ ریچارج کی خریداری □ مالیاتی سروسز □ ملکیت کی منتقلی □ دیگر، براہ مہربانی وضاحت کریں

(6) آپ کا موجودہ سیلولر سروس فراہم کنندہ مندرجہ ذیل کارپوریٹ سماجی ذمہ داری میں سے کن سرگرمیوں میں حصہ لیتا ہے (آپ ایک سے زیادہ باکس منتخب کر سکتے ہیں)

□ تعلیم کا شعبہ، مثال کے طور پر: سکول کو سہولیات کی فراہمی، اساتذہ کے لئے تربیتی پروگرام وغیرہ۔
□ صحت کا شعبہ، مثال کے طور پر: طبی سہولیات کی فراہمی، خون کے عطیات وغیرہ۔
□ ماحولیاتی نظام کو برقرار رکھنا، مثال کے طور پر: درخت لگانا، پینے کے پانی کی فلٹریشن وغیرہ۔
□ آفات کے لئے امداد، مثال کے طور پر: زلزلہ، سیلاب متاثرہ علاقوں وغیرہ کے لئے مدد۔
□ مندرجہ بالا میں سے کوئی بھی نہیں۔
□ دیگر، براہ مہربانی وضاحت کریں۔

(سیکشن سی)
جواب دہندگان کے ڈیموگرافکس

(1) رہائش کا موجودہ شہر □ لاہور □ کراچی □ کوئٹہ □ پشاور

(2) صنف □ مرد □ عورت

(3) عمر □ 18 سال سے کم □ 18-28 سال □ 29-39 سال □ 40-49 سال □ 50-59 سال

(4) تعلیم کی سطح □ مٹل اور اس سے کم □ میٹرک □ انٹرمیڈیٹ □ بیچلرز

□ ماسٹرز اور اس سے اوپر □ دیگر، براہ مہربانی وضاحت کریں

(5) ازدواجی حیثیت □ غیر شادی شدہ □ شادی شدہ □ طلاق شدہ/بیوہ

(6) پوزیشن □ طالب علم □ نوکری پیشہ □ گھریلو بیوی □ تاجر □ دیگر، براہ مہربانی وضاحت کریں

اگر آپ نوکری پیشہ ہیں تو، سوال نمبر 7 اور 8 کا جواب دیں، ورنہ سوال نمبر 9 پر جائیں۔

(7) آپ کیریئر کی کس سطح پر ہیں؟

□ داخلی سطح کی پوزیشن □ مڈ کیریئر □ اعلیٰ انتظامی پوزیشن □ دیگر، براہ مہربانی وضاحت کریں

(8) ملازمت کی قسم

☐ پرائیویٹ ملازمت ☐ سرکاری ملازمت ☐ نیم سرکاری ملازمت

(9) اوسط آمدنی (فی ماہ)

☐ 15000 روپے سے کم ☐ 15001-32000 روپے ☐ 32001-49000 روپے
☐ 49001-66000 روپے ☐ 66001-83000 روپے ☐ 83001-100,000 روپے
☐ 100,001 روپے یا زیادہ

آپ کا وقت اور تعاون کا شکریہ



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APPENDIX C
FORMATIVE VERSUS REFLECTIVE SCALE

	Formative Model	Reflective Model
1. Direction of causality from construct to measure implied by the conceptual definition	Direction of causality is from items to construct	Direction of causality is from construct to items
Are the indicators (items) (a) defining characteristics or (b) manifestations of the construct?	Indicators are defining characteristics of the construct	Indicators are manifestations of the construct
Would changes in the indicators/items cause changes in the construct or not?	Changes in the indicators should cause changes in the construct	Changes in the indicator should not cause changes in the construct
Would changes in the construct cause changes in the indicators?	Changes in the construct do not cause changes in the indicators	Changes in the construct do cause changes in the indicators
2. Interchangeability of the indicators/items	Indicators need not be interchangeable	Indicators should be interchangeable
Should the indicators have the same or similar content?	Indicators need not be interchangeable	Indicators should be interchangeable
Do the indicators share a common theme?	Indicators need not have the same or similar content/indicators need not share a common theme	Indicators should have the same or similar content/indicators should share a common theme
Would dropping one of the indicators alter the conceptual domain of the construct?	Dropping an indicator may alter the conceptual domain of the construct	Dropping an indicator should not alter the conceptual domain of the construct
3. Covariation among the indicators	Not necessary for indicators to covary with each other	Indicators are expected to covary with each other
Should a change in one of the indicators be associated with changes in the other indicators?	Not necessarily	Yes
4. Nomological net of the construct indicators	Nomological net for the indicators may differ	Nomological net for the indicators should not differ

	Formative Model	Reflective Model
5. Are the indicators/items expected to have the same antecedents and consequences?	Indicators are not required to have the same antecedents and consequences	Indicators are required to have the same antecedents and consequences

Source: Jarvis et al. (2003)



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APPENDIX D

LIST OF DATA COLLECTION LOCATIONS

Operator	Province (City)	Address	Source
Mobilink	Punjab (Lahore)	Eden center service road.	https://www.paked.net/articles/detail/List_of_Mobilink_Business_Centers_in_Lahore
	Sindh (Karachi)	Shahrah-e-faisal road.	https://www.paked.net/articles/detail/List_of_Mobilink_Business_Centers_in_Karachi
	Balochistan (Quetta)	Mobilink house, global center opposite police line gulistan road.	https://www.paked.net/articles/detail/List_of_Mobilink_Business_Centers_in_Quetta
	KPK (Peshawar)	Mobilink house, regional office, main arbab road.	https://www.paked.net/articles/detail/List_of_Mobilink_Business_Centers_in_Peshawar
Telenor	Punjab (Lahore)	12-a, k block, main boulevard, gulberg ii.	http://www.everything.pk/se-arches-telenor_lahore.html
	Sindh (Karachi)	The plaza arcade, do talwar, Clifton.	http://www.everything.pk/se-arches-telenor_karachi.html
	Balochistan (Quetta)	Plot number 151, 1-5/2a, x- regal café opposite farahn hotel, m.a. Jinnah road, adjacent suraj gunj bazaar.	http://www.everything.pk/se-arches-telenor_quetta.html
	KPK (Peshawar)	Aman center, near custom house, jamrud road, university town.	http://www.everything.pk/se-arches-telenor_peshawar.html
Zong	Punjab (Lahore)	6-c/3 wb mall near hussain chowk opposite raja shab, noor jahan road gulberg 3.	https://www.zong.com.pk/about-zong/customer-service-centers
	Sindh (Karachi)	Gulshan-e-iqbal opposite batul mukaram masjid.	https://www.zong.com.pk/about-zong/customer-service-centers
	Balochistan (Quetta)	Cmpak office near fayyaz lab, jinnah road.	https://www.zong.com.pk/about-zong/customer-service-centers
	KPK (Peshawar)	Marhaba tower opposite usmania restaurant university road.	https://www.zong.com.pk/about-zong/customer-service-centers
Ufone	Punjab (Lahore)	15-s, gulberg ii, mini market.	https://www.ufone.com/support/our-offices/
	Sindh (Karachi)	D-3, block-d, near five star roundabout, north nazimabad.	https://www.ufone.com/support/our-offices/
	Balochistan (Quetta)	Shahab manzil, jinnah road.	https://www.ufone.com/support/our-offices/
	KPK (Peshawar)	Main university road, opposite toyota frontier motors, peshawar cantt.	https://www.ufone.com/support/our-offices/

Warid	Punjab (Lahore)	1k, main boulevard, gulberg ii.	Http://www.waridtel.com/customer-care/business-centres-franchises/1/46
	Sindh (Karachi)	Usman plaza, plot # sb37, block 13b, scheme # 24, gulshan e iqbal.	Http://www.waridtel.com/customer-care/business-centres-franchises/2/73
	Balochistan (Quetta)	Agha siraj complex, main jinnah road.	Http://www.waridtel.com/customer-care/business-centres-franchises/4/108
	KPK (Peshawar)	Old honda sarhad building, jamrud road.	Http://www.waridtel.com/customer-care/business-centres-franchises/3/132



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APPENDIX E

SPSS OUTPUT RESULTS

Missing Value Analysis

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases	Creating Function
			First	Last		
1	Tan1_1	2	1	392	392	SMEAN(Tan1)
2	Tan2_1	1	1	392	392	SMEAN(Tan2)
3	Tan3_1	0	1	392	392	SMEAN(Tan3)
4	Tan4_1	0	1	392	392	SMEAN(Tan4)
5	Rel1_1	1	1	392	392	SMEAN(Rel1)
6	Rel2_1	0	1	392	392	SMEAN(Rel2)
7	Rel3_1	2	1	392	392	SMEAN(Rel3)
8	Rel4_1	1	1	392	392	SMEAN(Rel4)
9	Rel5_1	0	1	392	392	SMEAN(Rel5)
10	Resp1_1	0	1	392	392	SMEAN(Resp1)
11	Resp2_1	0	1	392	392	SMEAN(Resp2)
12	Resp3_1	0	1	392	392	SMEAN(Resp3)
13	Resp4_1	1	1	392	392	SMEAN(Resp4)
14	As1_1	0	1	392	392	SMEAN(As1)
15	As2_1	0	1	392	392	SMEAN(As2)
16	As3_1	0	1	392	392	SMEAN(As3)
17	As4_1	0	1	392	392	SMEAN(As4)
18	Emp1_1	0	1	392	392	SMEAN(Emp1)
19	Emp2_1	1	1	392	392	SMEAN(Emp2)
20	Emp3_1	0	1	392	392	SMEAN(Emp3)
21	Emp4_1	0	1	392	392	SMEAN(Emp4)
22	Emp5_1	0	1	392	392	SMEAN(Emp5)
23	SQG_1	0	1	392	392	SMEAN(SQG)
24	PV1_1	1	1	392	392	SMEAN(PV1)
25	PV2_1	1	1	392	392	SMEAN(PV2)
26	PV3_1	1	1	392	392	SMEAN(PV3)
27	PV4_1	1	1	392	392	SMEAN(PV4)
28	SPM1_1	1	1	392	392	SMEAN(SPM1)
29	SPM2_1	0	1	392	392	SMEAN(SPM2)
30	SPM3_1	1	1	392	392	SMEAN(SPM3)
31	SPM4_1	0	1	392	392	SMEAN(SPM4)
32	SPN1_1	1	1	392	392	SMEAN(SPN1)
33	SPN2_1	2	1	392	392	SMEAN(SPN2)
34	SPN3_1	1	1	392	392	SMEAN(SPN3)
35	SPN4_1	0	1	392	392	SMEAN(SPN4)
36	SPG_1	0	1	392	392	SMEAN(SPG)
37	PCSR1_1	0	1	392	392	SMEAN(PCSR1)
38	PCSR2_1	0	1	392	392	SMEAN(PCSR2)
39	PCSR3_1	0	1	392	392	SMEAN(PCSR3)
40	PCSR4_1	1	1	392	392	SMEAN(PCSR4)
41	PCSR5_1	0	1	392	392	SMEAN(PCSR5)
42	CS1_1	1	1	392	392	SMEAN(CS1)
43	CS2_1	0	1	392	392	SMEAN(CS2)
44	CS3_1	1	1	392	392	SMEAN(CS3)
45	CT1_1	1	1	392	392	SMEAN(CT1)

46	CT2_1	1	1	392	392	SMEAN(CT2)
47	CT3_1	1	1	392	392	SMEAN(CT3)
48	CT4_1	0	1	392	392	SMEAN(CT4)
49	CT5_1	1	1	392	392	SMEAN(CT5)
50	GR1_1	3	1	392	392	SMEAN(GR1)
51	GR2_1	0	1	392	392	SMEAN(GR2)
52	GR3_1	1	1	392	392	SMEAN(GR3)
53	GR4_1	0	1	392	392	SMEAN(GR4)
54	GRG_1	0	1	392	392	SMEAN(GRG)
55	CL1_1	1	1	392	392	SMEAN(CL1)
56	CL2_1	1	1	392	392	SMEAN(CL2)
57	CL3_1	3	1	392	392	SMEAN(CL3)
58	CL4_1	0	1	392	392	SMEAN(CL4)
59	CL5_1	2	1	392	392	SMEAN(CL5)

**Multivariate Outliers
Mahalanobis D² Results**

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.3251	6.8927	5.1663	1.03929	392
Std. Predicted Value	-3.696	1.661	.000	1.000	392
Standard Error of Predicted Value	.040	.213	.084	.027	392
Adjusted Predicted Value	1.3219	6.8907	5.1656	1.03880	392
Residual	-2.12577	1.89958	.00000	.61012	392
Std. Residual	-3.453	3.085	.000	.991	392
Stud. Residual	-3.473	3.140	.001	1.004	392
Deleted Residual	-2.15120	1.96713	.00072	.62629	392
Stud. Deleted Residual	-3.525	3.177	.000	1.007	392
Mahal. Distance	.684	45.969	6.982	5.382	392
Cook's Distance	.000	.074	.003	.008	392
Centered Leverage Value	.002	.118	.018	.014	392

a. Dependent Variable: CL

Nonresponse Bias

Group Statistics

	Dummy	N	Mean	Std. Deviation	Std. Error Mean
PSQ	Early	265	4.9911	1.05632	.06489
	Late	123	5.0388	1.02432	.09236
PV	Early	265	4.8981	1.16896	.07181
	Late	123	5.0569	1.18599	.10694
SP	Early	265	4.5632	1.25081	.07684
	Late	123	4.5193	1.38558	.12493
PCSR	Early	265	4.7192	1.23839	.07607
	Late	123	4.5919	1.38313	.12471
CS	Early	265	5.2075	1.22066	.07498
	Late	123	4.9485	1.36508	.12309
CT	Early	265	5.1352	1.20755	.07418
	Late	123	5.0081	1.20201	.10838
GR	Early	265	2.9123	1.19761	.07357

CL	Late	123	3.0874	1.17522	.10597
	Early	265	5.1902	1.16868	.07179
	Late	123	5.1073	1.24223	.11201

Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PSQ	Equal variances assumed	.303	.582	-.418	386	.676	-.04772	.11416	-.27217	.17672
	Equal variances not assumed			-.423	244.621	.673	-.04772	.11288	-.27005	.17461
PV	Equal variances assumed	.155	.694	1.239	386	.216	-.15880	.12813	-.41071	.09312
	Equal variances not assumed			1.233	234.771	.219	-.15880	.12881	-.41257	.09497
SP	Equal variances assumed	1.680	.196	.311	386	.756	.04390	.14128	-.23388	.32168
	Equal variances not assumed			.299	217.376	.765	.04390	.14667	-.24518	.33298
PCSR	Equal variances assumed	1.038	.309	.908	386	.364	.12738	.14030	-.14847	.40322
	Equal variances not assumed			.872	215.869	.384	.12738	.14608	-.16056	.41531
CS	Equal variances assumed	1.748	.187	1.872	386	.062	.25904	.13835	-.01298	.53106
	Equal variances not assumed			1.797	215.635	.074	.25904	.14413	-.02504	.54312
CT	Equal variances assumed	.013	.908	.966	386	.335	.12709	.13156	-.13157	.38575
	Equal variances not assumed			.968	238.850	.334	.12709	.13134	-.13164	.38582
GR	Equal variances assumed	.020	.887	1.348	386	.178	-.17513	.12990	-.43053	.08026
	Equal variances not assumed			1.358	241.975	.176	-.17513	.12900	-.42924	.07897

CL	Equal variances assumed	.371	.543	.637	386	.525	.08287	.13010	.17292	.33866
	Equal variances not assumed			.623	225.260	.534	.08287	.13304	.17929	.34504

Demographic Profile

City

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LahorE	213	54.9	54.9	54.9
Karachi	93	24.0	24.0	78.9
Quetta	23	5.9	5.9	84.8
Peshawar	59	15.2	15.2	100.0
Total	388	100.0	100.0	

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid MALE	210	54.1	54.1	54.1
FEMALE	178	45.9	45.9	100.0
Total	388	100.0	100.0	

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-28 years	194	50.0	50.0	50.0
29-39 years	131	33.8	33.8	83.8
40-49 years	41	10.6	10.6	94.3
50-59 years	13	3.4	3.4	97.7
60 years and above	9	2.3	2.3	100.0
Total	388	100.0	100.0	

Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Middle and Below	14	3.6	3.6	3.6
Matric	27	7.0	7.0	10.6
Intermediate	140	36.1	36.1	46.6
Bachelor	148	38.1	38.1	84.8
Masters and above	59	15.2	15.2	100.0
Total	388	100.0	100.0	

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	171	44.1	44.1	44.1
Married	207	53.4	53.4	97.4
Divorced/Widow or Widower	10	2.6	2.6	100.0

Total	388	100.0	100.0
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Position

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Student	63	16.2	16.2	16.2
Valid Job Holder	216	55.7	55.7	71.9
Valid House hold wife	16	4.1	4.1	76.0
Valid Self employed	93	24.0	24.0	100.0
Total	388	100.0	100.0	

Career_Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Entry Level	137	35.3	63.4	63.4
Valid Mid-Career	69	17.8	31.9	95.4
Valid Top Management	10	2.6	4.6	100.0
Total	216	55.7	100.0	
Missing 99	172	44.3		
Total	388	100.0		

Job_Type

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Private	122	31.4	56.5	56.5
Valid Government	44	11.3	20.4	76.9
Valid Semi_Government	50	12.9	23.1	100.0
Total	216	55.7	100.0	
Missing 99	172	44.3		
Total	388	100.0		

Average_Income

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Below Rs. 15000	88	22.7	22.7	22.7
Valid Rs. 15001- 32000	149	38.4	38.4	61.1
Valid Rs. 32001- 49000	48	12.4	12.4	73.5
Valid Rs. 49001-66000	38	9.8	9.8	83.2
Valid Rs. 66001- 83000	20	5.2	5.2	88.4
Valid Rs. 83001-100,000	35	9.0	9.0	97.4
Valid Rs. 100,001 AND above	10	2.6	2.6	100.0
Total	388	100.0	100.0	

Characteristics of Cellular Consumers

Simtype

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Prepaid	388	100.0	100.0	100.0

Frequently

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mobilink	115	29.6	29.6	29.6
	Telenor	107	27.6	27.6	57.2
	Zong	72	18.6	18.6	75.8
	Ufone	60	15.5	15.5	91.2
	WariD	34	8.8	8.8	100.0
	Total	388	100.0	100.0	

Simcard_Count

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	142	36.6	36.6	36.6
	2	120	30.9	30.9	67.5
	3	67	17.3	17.3	84.8
	4	42	10.8	10.8	95.6
	5	17	4.4	4.4	100.0
	Total	388	100.0	100.0	

Switched

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	120	30.9	30.9	30.9
	YES	268	69.1	69.1	100.0
	Total	388	100.0	100.0	

Reason_Switching

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Atractive call, sms & internet packages	109	28.1	40.7	40.7
	Distance from service center	26	6.7	9.7	50.4
	Friends & Family	28	7.2	10.4	60.8
	Network Problem	69	17.8	25.7	86.6
	Hidden Charges	36	9.3	13.4	100.0
	Total	268	69.1	100.0	
Missing	99	120	30.9		
Total		388	100.0		

Packages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Voice calls AND SMS	129	33.2	33.2	33.2
	Internet	56	14.4	14.4	47.7
	Both	203	52.3	52.3	100.0
	Total	388	100.0	100.0	

SIM_Purchase

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	164	42.3	42.3	42.3
	YES	224	57.7	57.7	100.0
	Total	388	100.0	100.0	

Biometrics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	138	35.6	35.6	35.6
	YES	250	64.4	64.4	100.0
	Total	388	100.0	100.0	

Recharge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	270	69.6	69.6	69.6
	YES	118	30.4	30.4	100.0
	Total	388	100.0	100.0	

FS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	356	91.8	91.8	91.8
	YES	32	8.2	8.2	100.0
	Total	388	100.0	100.0	

Ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	308	79.4	79.4	79.4
	YES	80	20.6	20.6	100.0
	Total	388	100.0	100.0	

Others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	344	88.7	88.7	88.7
	sim replacement	10	2.6	2.6	91.2
	Package information	34	8.8	8.8	100.0
	Total	388	100.0	100.0	

Edu

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	257	66.2	66.2	66.2
	YES	131	33.8	33.8	100.0
	Total	388	100.0	100.0	

Health					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	311	80.2	80.2	80.2
	YES	77	19.8	19.8	100.0
	Total	388	100.0	100.0	

Ecosystem					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	361	93.0	93.0	93.0
	YES	27	7.0	7.0	100.0
	Total	388	100.0	100.0	

Disaster					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	340	87.6	87.6	87.6
	YES	48	12.4	12.4	100.0
	Total	388	100.0	100.0	

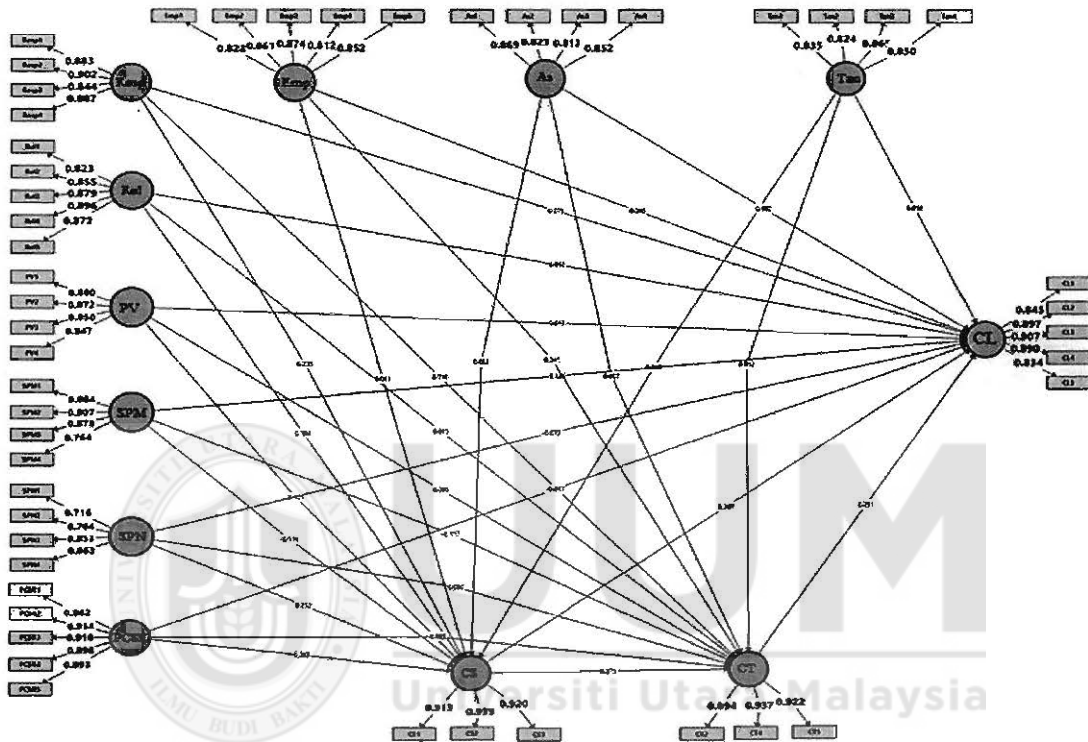
CSR_None					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	218	56.2	56.2	56.2
	YES	170	43.8	43.8	100.0
	Total	388	100.0	100.0	

CSR_Others					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	385	99.2	99.2	99.2
	Facilitation of Handicaped Customers	3	.8	.8	100.0
	Total	388	100.0	100.0	

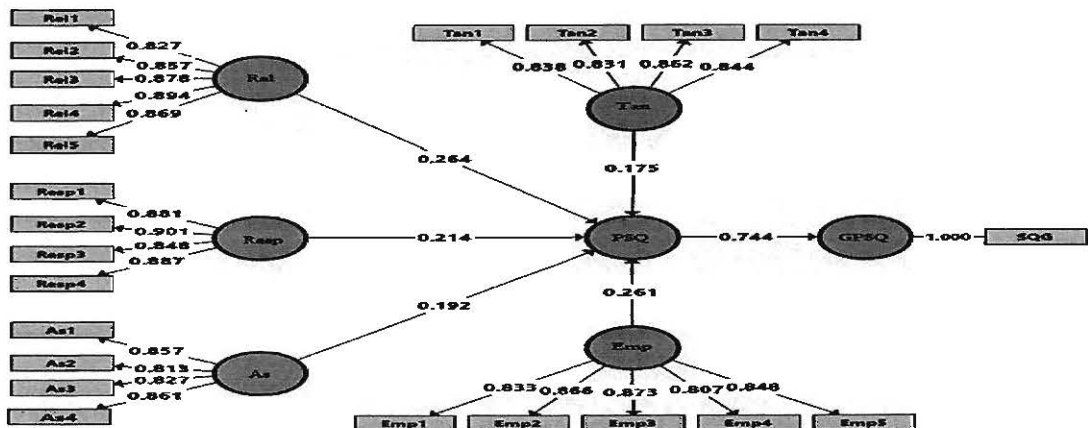
APPENDIX F

PLS RESULTS OUTPUT

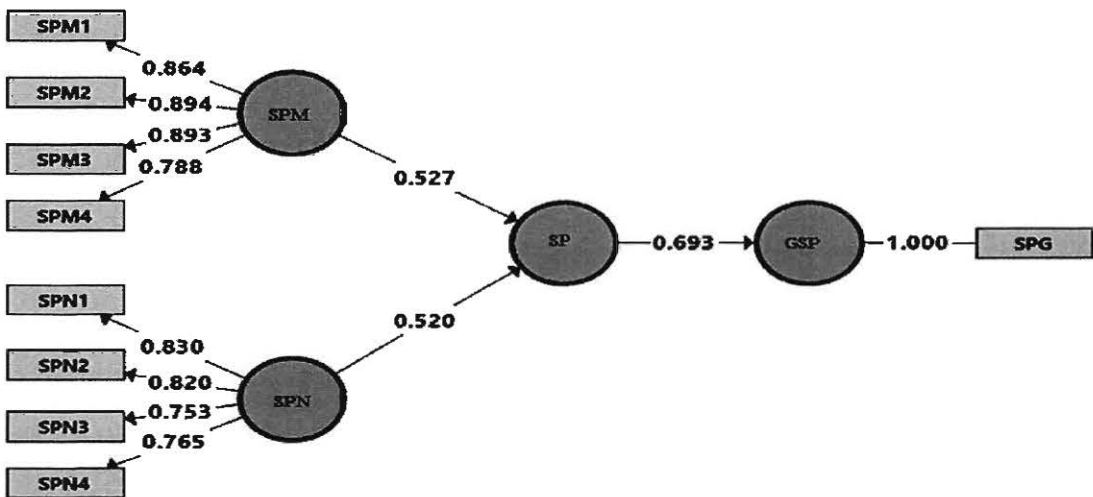
Reflective Measurement Model Algorithm Results (Stage 1)



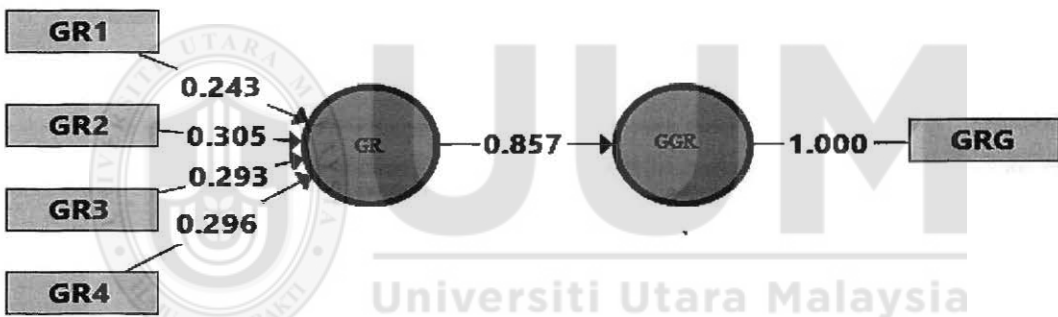
Redundancy Analysis of Perceived Service Quality (PSQ)



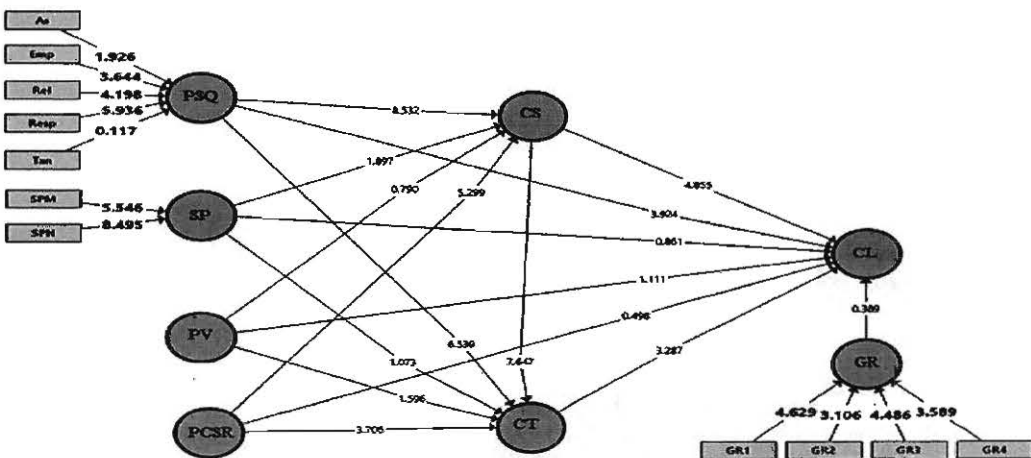
Redundancy Analysis of Sales Promotion (SP)



Redundancy Analysis of Government Regulations (GR)

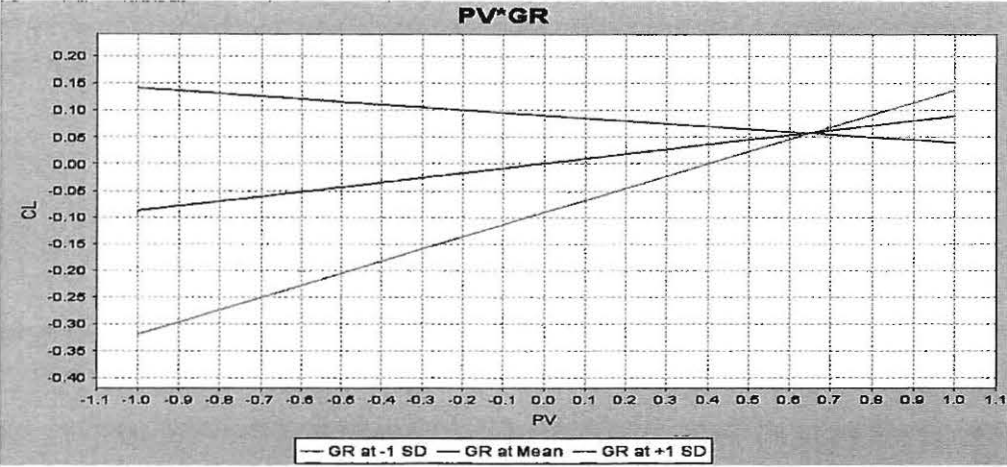


Bootstrapping Results for Assessment of Formative Measurement Model, t values (Stage 2)

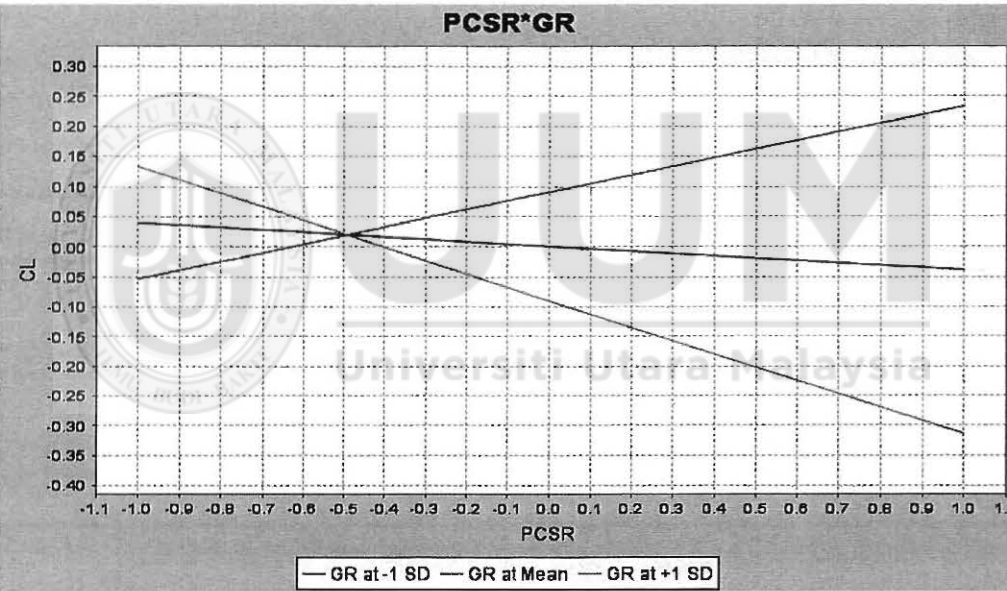


Two Way Interaction Effects for Moderation

1. $PV*GR \rightarrow CL$



2. $PCSR*GR \rightarrow CL$



APPENDIX G

LIST OF PUBLICATIONS

- Understanding the Moderating Role of Government Regulations in Telecom Sector of Pakistan: Journal of Telecommunication, Electronic and Computer Engineering (Scopus Indexed).
- Do Government Regulations Moderate the Oliver's Four Stage Loyalty Linkage? A Pilot Study in Cellular Industry of Pakistan: Asian Journal of Multidisciplinary Studies.
- The Determinants of Customer Loyalty in Telecommunication industry in Pakistan: International Journal of Business Marketing and Management.



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